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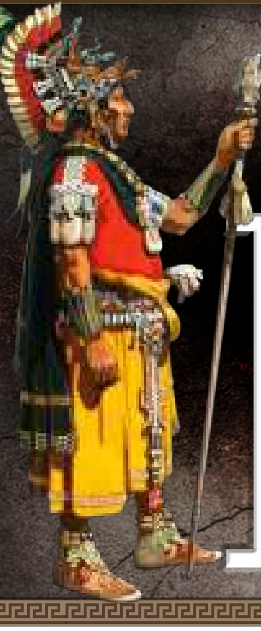

THE ANCIENT MAYA

UNCOVER ONE OF THE WORLD'S GREATEST CIVILISATIONS

INSIDE
DISCOVER THE BLOODY DEMISE OF THE MAYA

ALL ABOUT HISTORY

Digital Edition

FUTURE

THIRD EDITION

WAR · ARCHITECTURE · ARTWORK · GODS

WELCOME

The Maya are a mystery, a people who carved out a sprawling civilisation among the jungles of Latin America and yet remain shrouded in myths and legends. In this bookazine you will delve into the scriptures, science and sacrifices that defined Maya life, witness the harsh reality of the wars that crushed cities and wonder at the art these fascinating people left behind. Then it will be time to roll up your sleeves and learn to cook like a native, before washing your tamale down with a unique Maya chocolate drink. Provided you've appeased the gods, the secrets of their writings and worship will be revealed as you wander the ruins of crumbling temples and bone-littered tombs. Those who make it out will meet the foreigner who fought for the Maya against his own people, discover how the Spanish attempted to wipe the Maya off the map and explore the efforts of their descendants to protect their legacy.

FUTURE

THE ANCIENT
MAYA

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The seeds of the great Maya civilisation that would blossom during the Classic period were planted thousands of years before

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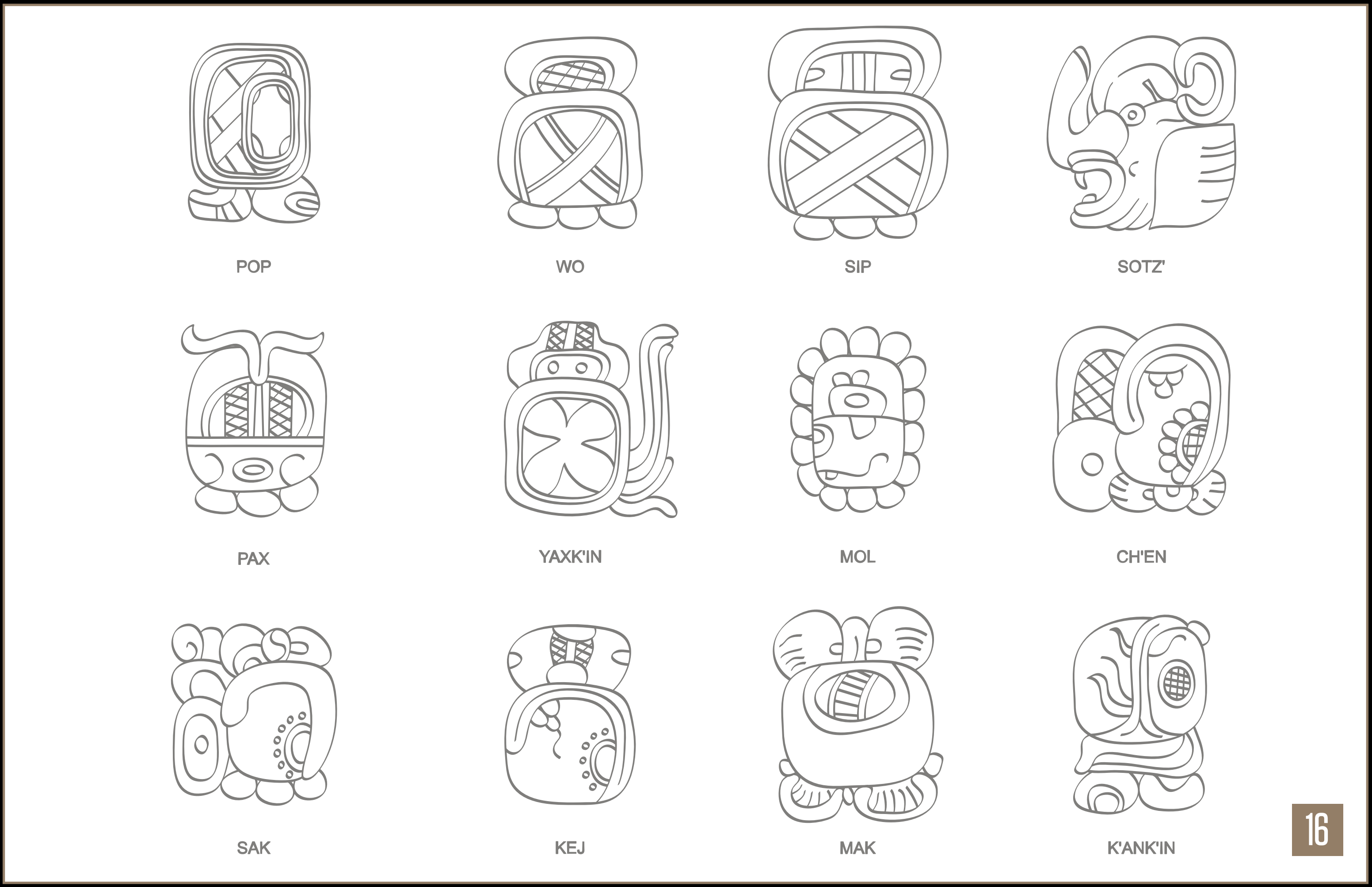
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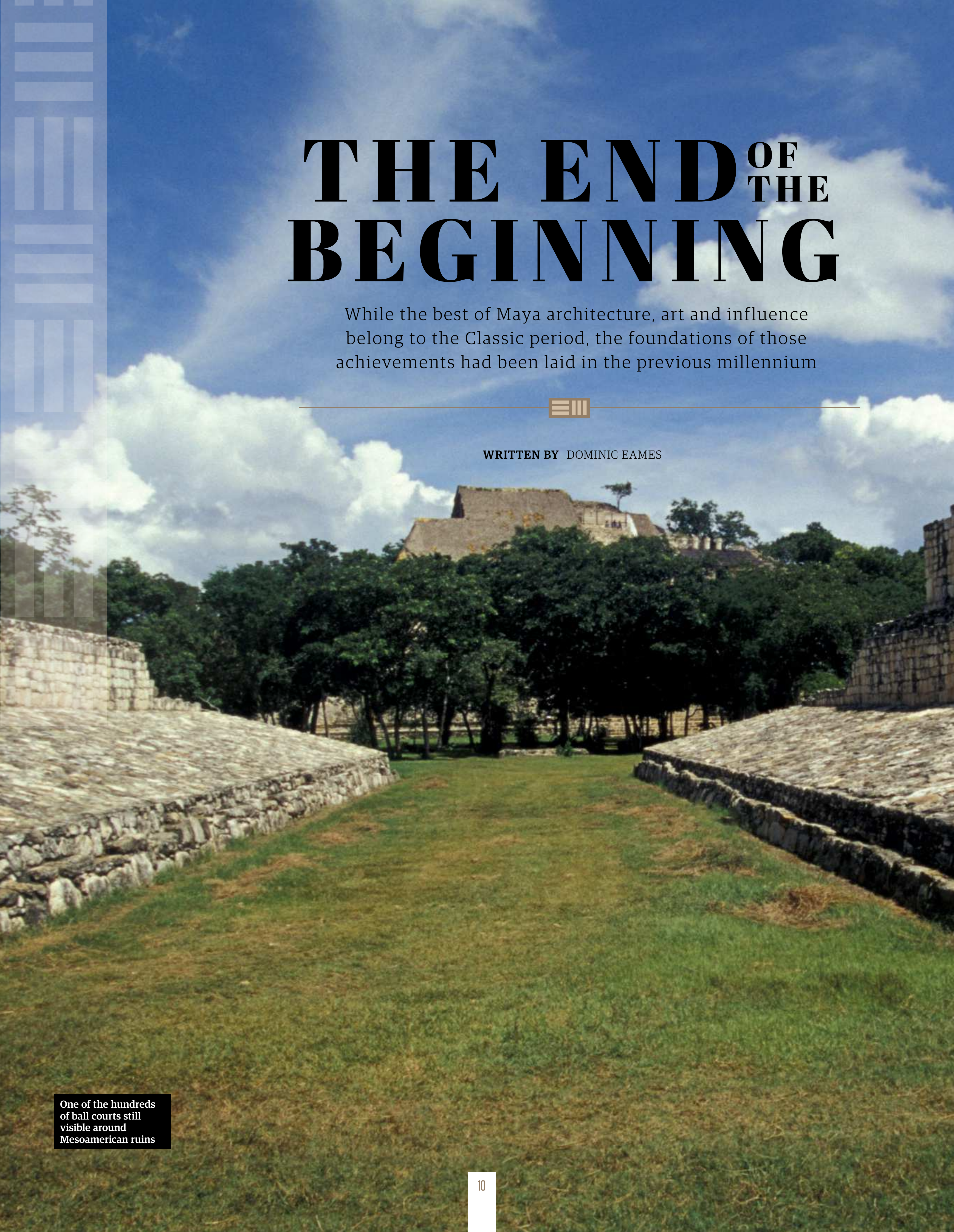
THE END OF THE BEGINNING

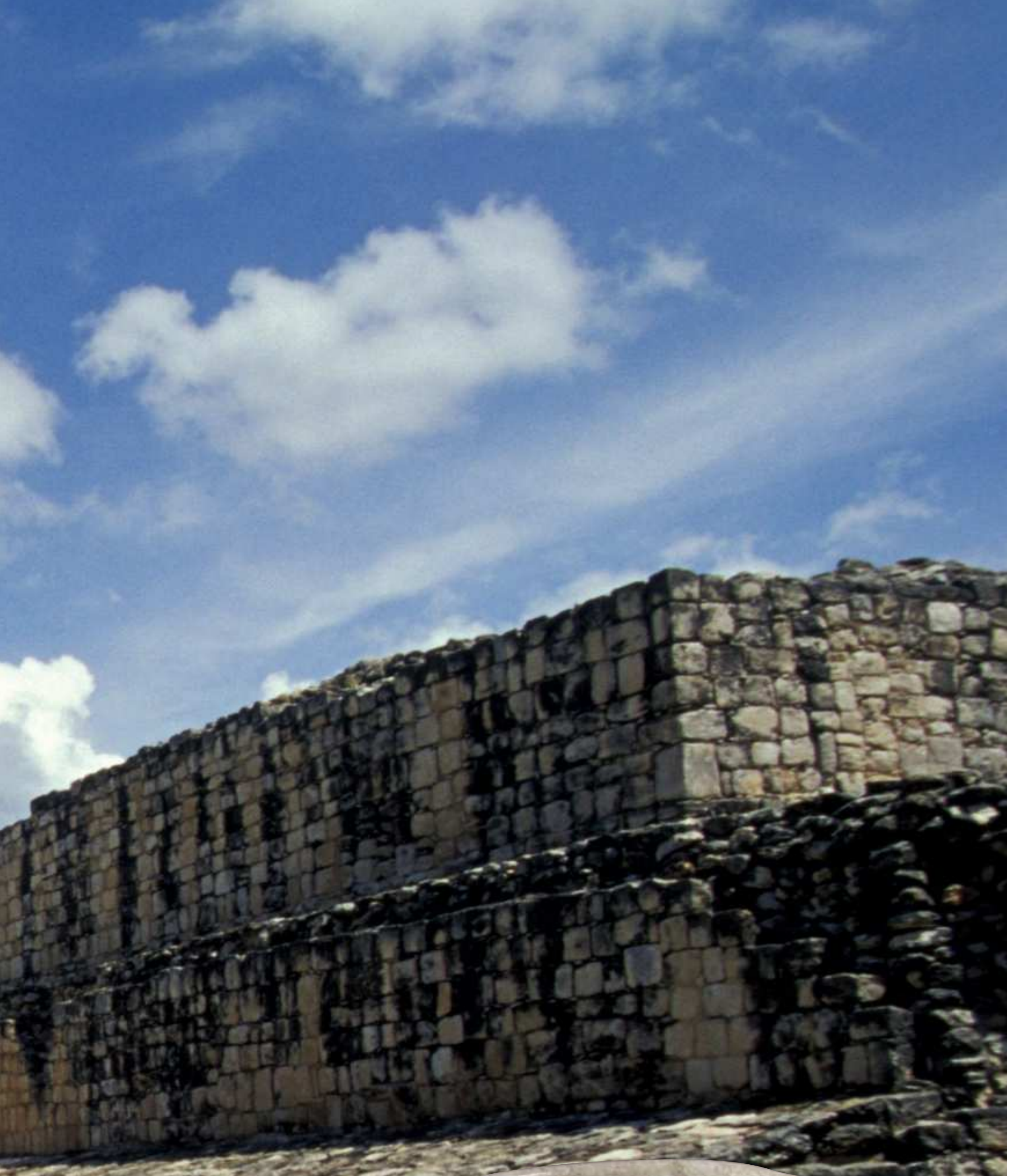
While the best of Maya architecture, art and influence belong to the Classic period, the foundations of those achievements had been laid in the previous millennium

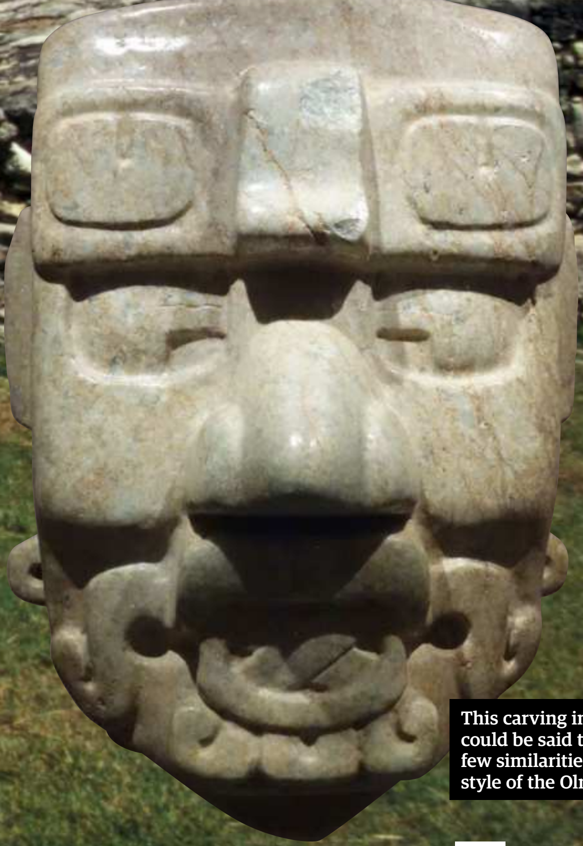
WRITTEN BY DOMINIC EAMES



One of the hundreds of ball courts still visible around Mesoamerican ruins

Beginnings





This carving in jadeite could be said to have a few similarities to the style of the Olmecs

From the cradle of civilisation that was Mesoamerica came the Maya. They would not go on to establish one of the ancient world's dominant empires, nor did they capture more land than any other ancient people. Archaeologists and historians instead used to look upon the evidence of the Maya skill at astronomy and making calendars as proof that they were just peaceful stargazers. While there is still so much that remains mysterious about them, though, we know more than ever the true mark they left on the landscape and history of the Americas.

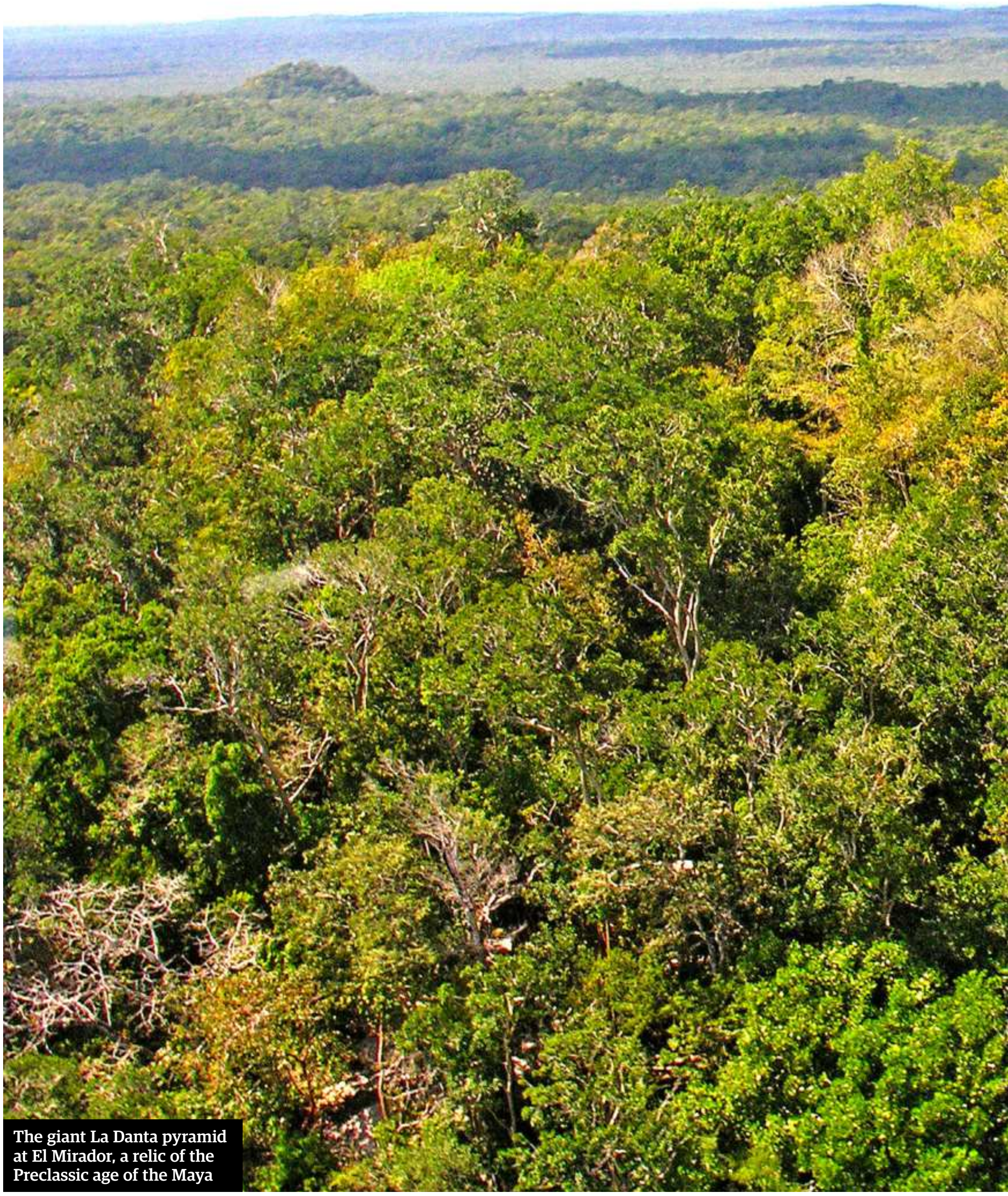
At the same time the Maya civilisation slowly emerged in the so-called Preclassic period, across the world the Egyptian pharaohs reigned supreme; the Minoans came and went; Mesopotamia was ruled by the Neo-Assyrian Empire; the first Olympics were held in Greece; the city of Rome was founded; and the different states of China fought constantly until eventually being unified. Meanwhile, the Maya had gone from hunter-gatherers to building monumental cities, waging wars on one another, establishing impressive trade links and creating intricate writing and calendar systems – and this was all achieved before the Maya people reached their full potential.

While the earliest Maya started out on the Pacific coast of modern-day Guatemala, the Preclassic period saw them head inland and spread out to a diverse range of environments. They would inhabit areas of southeastern Mexico, Belize and parts of Honduras and El Salvador. From the highlands of Guatemala's mountain ranges to the lowlands all the way through the Yucatán Peninsula, their settlements prospered.

Not that the region made for ideal ground on which a great ancient civilisation could take root. The other 'cradles of civilisation' around the world arose near fertile river valleys (Egypt had the Nile and Mesopotamia had the Tigris and Euphrates), but Mesoamerica offered the Maya a limestone shelf and dense forest. This meant that fresh water supplies were far from abundant, without even mentioning that, while rains fell for half the year, the Maya had to contend with long spells of drought. The limestone did at least make for some durable building material.

Innovative methods of ensuring they had sources of water were vital for the Maya's survival. One option was to filter the salty water that pooled naturally in underground caves using sand, and archaeological findings at the ruins of major cities like Tikal and Palenque show the Maya directed rainwater using dams and reservoirs. They also carved out trenches on hillsides to enable water to run into large human-made chambers, or chultuns – essentially large holes in the ground, waterproofed by a type of plaster called stucco.

Since long before the time of the Preclassic Maya, the peoples of Mesoamerica in the Archaic period had been adopting agricultural methods.



The giant La Danta pyramid at El Mirador, a relic of the Preclassic age of the Maya

Primarily, they utilised 'slash and burn', which consisted of cutting down forests to make farmland and burning felled trees to make the soil more fertile. Intriguingly, the deforestation carried out by the Maya – not just for crops but to make the stucco used to cover buildings and pave roads – actually caused severe environmental issues in the region, so much so that it may hold the answer to what eventually caused their decline.

Farming enabled the early Maya to cultivate maize, beans and squash as staple foods, as well as grow other crops like cassava and chili peppers. It proved so successful that analysis of unearthed bones show that by the Preclassic period maize was already considered a major part of the diet. They would still rely, however, on hunting, fishing (a much more common pastime in the coastal villages than inland) and foraging.

By around 1000 BCE the Maya had become their own distinct group among the Mesoamerican cultures and developed complex societies. Their first settlements were small and a long way from the towering architecture now most associated with the Maya, but the people had introduced forms of political structures, which would be based on the rule of divine kings, social hierarchy, and religious practices. They continued to spread, too. Having migrated into modern-day Belize, the Maya built the villages of Colha, Cuello and Lamanai, the latter growing into a major city that remained occupied for three millennia.

As the size of the Maya world expanded so did the differences between the various pockets of population. This could be seen in cultural customs or dialects. The Maya never recognised themselves as part of a single identity and were certainly never politically united, unlike the Aztecs of central Mexico or the Incas in the Andes. In fact, they did not even refer to themselves as 'Maya', a term that was assigned to the culture later on. Instead they formed individual autonomous cities, much like ancient Greece, while maintaining shared 'Maya' roots.

These embryonic city-states came into contact with other Mesoamerican civilisations, most notably the Olmecs. Long established and at the pinnacle of their power, they proved to be a key trading partner and the connection and sharing of ideas would have long-lasting, profound effects on the younger culture. Fundamental aspects of Olmec beliefs, from the worship of jaguars to individual deities like the feathered serpent and maize god, were absorbed, as well as elements of language and artistic style. At the ruins of the Maya city of Tak'alik Ab'aj, which translates at 'standing stones', archaeologists discovered sculptures strongly resembling the Olmecs, including carvings that look like their famous colossal heads.

Perhaps the influence of the Olmecs partly inspired the Maya to begin turning their villages into cities in the first place. Nakbe was among one of the earliest cities, already inhabited and extended to unprecedented sizes during the 8th century BCE, so that it included huge platforms on which many limestone buildings could be erected. This signified a shift from primarily residential settlements to cities with civic, political and religious centres. In time Nakbe would boast a pyramid 46 metres high and one of the first courts for the potently symbolic ball game Pok-Ta-Pok. The buildings were then linked by causeways made of crushed white plaster.

So while the monumental architecture seen today in the ruins of great cities mostly date from the following millennium – when the Maya civilisation flourished – the process had begun in the Preclassic period. With those cities came advances in irrigation too, improving agriculture to feed the increasing population.

No better place was that seen than at El Mirador. The colossal city of the Late Preclassic centuries was a sign of things to come for Maya city-states, with a centre covering 26 square kilometres and boasting thousands of structures. Even the fact that it was built near swamps was used to the advantage of the Maya as the mud, with some added lime, made for rich and fertile soil for crops.

This made it possible for El Mirador to support a huge population, thought to be around 100,000, but it could have been as high as 200,000, which would it make it comparable to the largest Classic period cities and other Mesoamerican metropolises like Teotihuacán and the Aztec capital Tenochtitlán at its peak. The site had two major pyramids, El Tigre and La Danta, measuring 55 and 72 metres respectively. While not as tall as other ancient pyramids, La Danta ranks as one of the largest ever made as it is 2.8 million cubic metres in volume.

WHO WERE THE OLMECS?

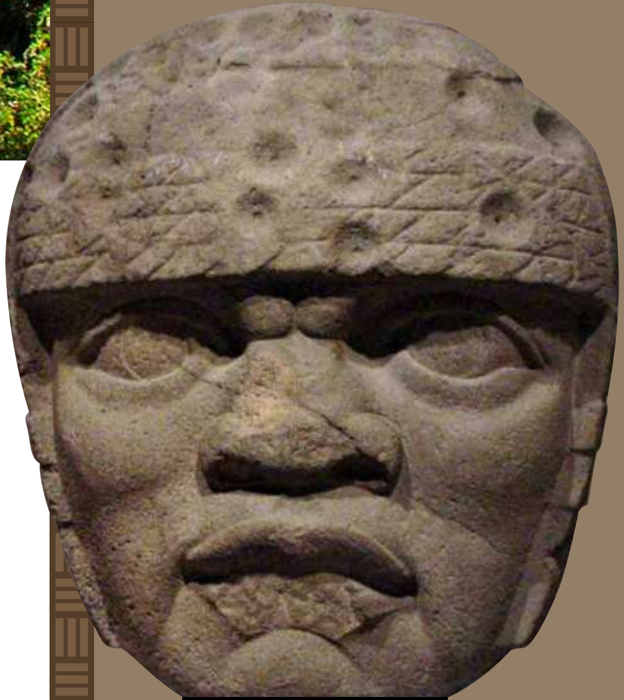
THE MAYA HAD A LOT OF REASONS TO THANK THE 'RUBBER PEOPLE' AND THEIR BIG HEADS

If Mesoamerica was a cradle of civilisation in the Americas, then the Olmec culture could be considered the mother of the peoples that emerged there. They were the first great civilisation, reaching their apogee c1200 BCE in what is now the Mexican states of Veracruz and Tabasco on the Gulf of Mexico.

Monumental architecture, mythology, beliefs and deities, worship of the jaguar, and the ball game Pok-Ta-Pok were just some of the features of Olmec culture that spread to other peoples in Mesoamerica, including the Maya. Their name, Olmec, is actually a word from Nahuatl – the language of the Aztecs – meaning 'rubber people', as they had made rubber by extracting latex from trees and mixing it with juice from the vines.

Starting with San Lorenzo, the Olmecs built cities of earthworks, stone monuments and huge buildings. However, they are now best known for their giant carved stone heads; flat-faced and wearing helmets (possibly to play the ball game). The Olmecs were master artists on a smaller scale too, sculpting in jade, ceramic and wood. They established an extensive trading network, which had a substantial impact on the Maya culture. The Olmecs were in decline by c400 BCE, but their influence would endure in the Americas.

Only glimpses remain of the former glory of El Mirador, an enormous metropolis

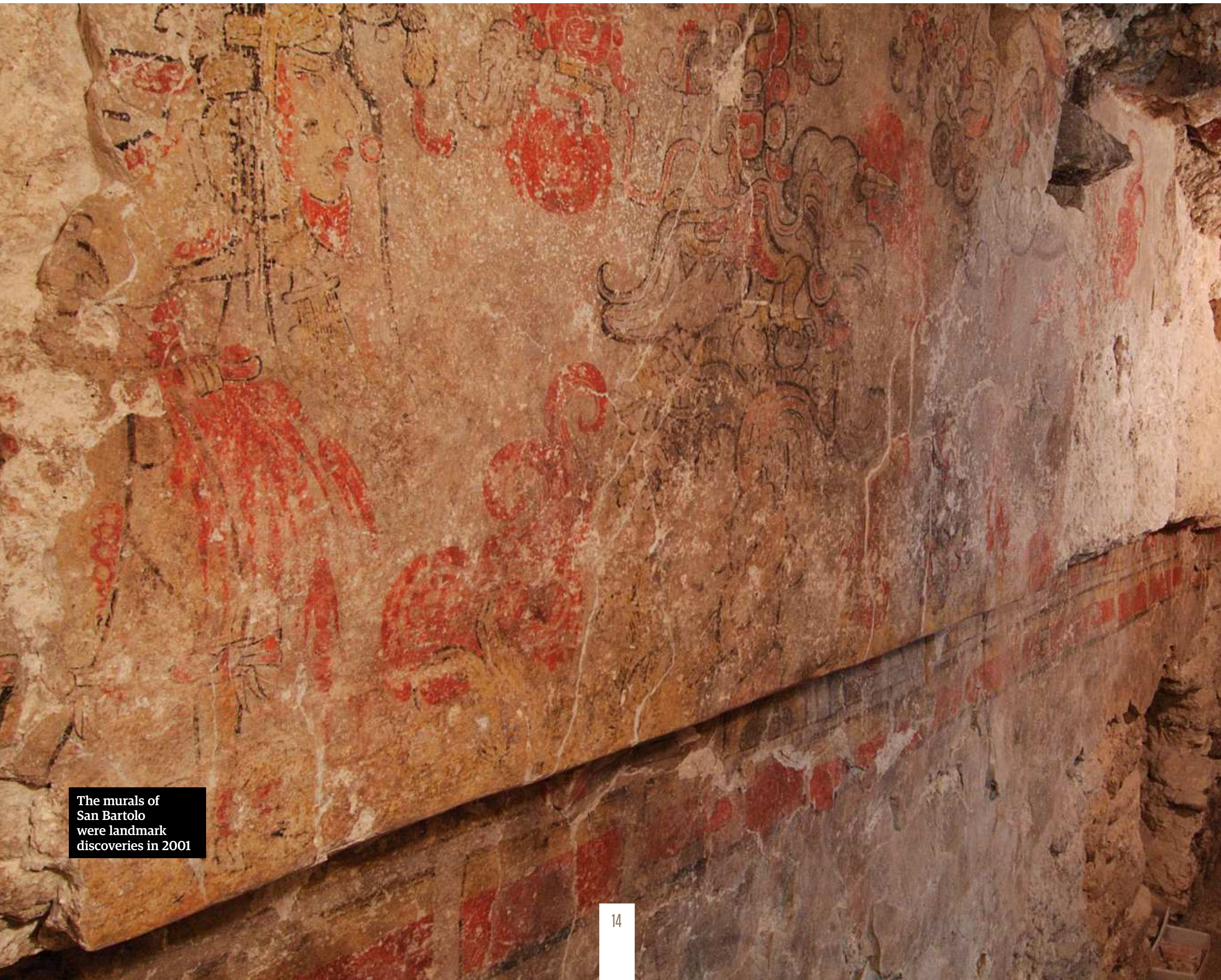


The colossal heads are an icon of the Olmec people; some of them could reach 3.5m in height

Steps lead up to the pyramid at Nakbe, an early Maya settlement

Pyramids were not the only structures in honoured spots in the cities though. In both El Mirador and Nakbe, the ball game court was built in the centre of the city, off the plaza near the temples and palaces. Far more than a simple sport, it held spiritual significance as it represented Maya beliefs of creation, and it was not just the Maya who thought that way. A similar version of the game was seen across the Mesoamerican cultures, possibly starting with the Olmecs, and thousands of courts were constructed.

The game, often referred to as Pok-Ta-Pok, was played between two teams on a narrow court with sloping walls on either side. They had to keep a heavy rubber ball in the air, passing it to teammates, either with the aim of getting it into the opponents' end zone, similar to American football today, or to throw it through a hoop attached to a side wall, a bit like basketball. The players, however,


The murals of San Bartolo were landmark discoveries in 2001

could not use their hands or feet so batted the ball away only using their hips, knees, shoulders and head, which sometimes caused serious damage as it could weigh around four kilograms.

The game was a religious display for the gods. Murals found on the sides of ball courts, including at Chichén Itzá, depict human sacrifice, which has been suggested to mean that the losing team were killed. Prisoners captured in battle may have been ritually executed by making them play the game and ensuring they lost. However, there is evidence to suggest that it may actually have been the winners who had the 'honour' of being sacrificed.

A total of 12 ball courts have been discovered at the city of Kaminaljuyu alone. Beneath the modern capital of Guatemala, it thrived as an enormous centre of trade for the Preclassic Maya. The true size of the ruins may never be fully understood as the new city sits on top, but it has still revealed a bounty of finds, such as millions of fragments from pottery and ceramics, and stone stelae depicting rulers. While these have no writing on them, which would become more prevalent in the Classic age, they ensure Kaminaljuyu's place as a site of archaeological importance.

The reason for the Preclassic city's trading success was that it had been built near a vast deposit of obsidian. The volcanic glass was always a prized item for the Maya as it could be sharpened to make weapons like knives and spear points or used as mirrors. With control over the obsidian supply in the region, Kaminaljuyu dominated for centuries. Other precious trading commodities in the period were jade, salt and cacao, and crafts became more popular too as ceramics and pottery were made with simple, elegant patterns.

Maya art, which again is most readily associated with the later Maya, became more sophisticated in the Preclassic millennium. Perhaps the finest examples of this were discovered on the murals unearthed from the ruins of a pyramid at San Bartolo, a city in Petén, Guatemala. Referred to as the 'Sistine Chapel' of Preclassic Maya art, the images, still seen in bright colours, date from 100 BCE, although the city itself was much older.

They show mythological stories and deities like the Hero Twins and the maize god, alongside other murals depicting the place of kings in society: at a coronation and offering his blood to the gods by piercing his body. Also found at San Bartolo were inscriptions from the 3rd century BCE, making them among the earliest-known examples of Maya glyphs and a reference to the calendar system. The murals at San Bartolo greatly increased our knowledge of the Maya when found in 2001 - and with each new discovery that brings previously lost information, what we know about this often mysterious people can suddenly change.

Towards the end of the Preclassic period, the Maya civilisation had numerous cities, with more being established as the migration of people gathered pace and the number of inhabitants continued to rise. These cities were initially founded as small towns, many of which would go on to be the foundations of the mighty city-states of the next millennium.

The Maya had also made giant strides in other areas. Their method of writing was one the most complex in Mesoamerica and was in use until the Spanish conquest, and they also achieved a masterly understanding of mathematics and astronomy that led to the refinement of not one but three incredibly accurate calendar systems.

This period of Maya history would have an enigmatic end. The civilisation seemed to stop its steady advance for reasons that can only be speculated, and cities like Nakbe, El Mirador and Kaminaljuyu were abandoned. It would be the 3rd century before the Maya would truly begin their rise towards the peak of their powers.

THE OTHER CRADLES OF CIVILISATION

AS WELL AS MESOAMERICA, THE FIRST CIVILISATIONS WERE BORN IN OTHER PARTS OF THE WORLD

MESOPOTAMIA

With Neolithic evidence going back to the 10th or 11th millennium BCE, this was the location of the earliest human civilisations. Two major rivers, the Tigris and Euphrates, converged to offer fertile soil and bountiful water in the region of modern-day Iraq, Iran and surrounding countries.

EGYPT

Before the pyramids and the pharaohs, settlements were appearing around 6000 BCE in Egypt. Much like Mesopotamia, Egypt is located on the 'fertile crescent', a crescent-shaped area of soil fit for agriculture. In Egypt, they relied on the Nile for life.

INDUS VALLEY

One of the earliest sites in the Indian subcontinent was Bhirrana, dated from the 8th to 7th millennium BCE. While the Indus Valley civilisation would not thrive until the 3rd century, its influence stretched into modern-day Pakistan, Afghanistan and India.

CHINA

The Yellow River is regarded as the cradle of Chinese civilisation, allowing several groups of people to flourish by cultivating rice as early as the 7th millennium BCE. The Peiligang culture in northern China had dozens of settlements, beginning with Jiahu.

ANDES

The other civilisations of the Americas emerged around the Andean region of Peru – perhaps the oldest being the Norte Chico in the 4th millennium BCE on the Pacific coast – and in valleys around three rivers: the Fortaleza, Pativilca and Supe.

Stone stelae in the Preclassic period very rarely had writing on them

DECIPHERING THE MAYA CALENDAR

How did this mysterious Mesoamerican civilisation keep track of the passing days, months and millennia?

WRITTEN BY SCOTT DUTFIELD

The Maya's complex, interconnected calendar system was perhaps their most intriguing innovation. In recent years, the Maya calendar has become associated with misconceived doomsday 'prophecies', but the ingenuity of this civilisation's timekeeping abilities is far more fascinating.

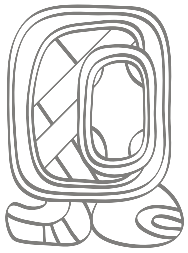
The Maya did not invent the calendar they used – similar systems were used by earlier pre-Columbian civilisations in the region – but they did develop the existing models. The Maya calendar consists of three interlocking calendars called the Tzolkin (the 'divine calendar'), the Haab' (the 'civil calendar') and the Long Count.

The smallest of the three, the Tzolkin, indicated the individual days, similar to how the modern-day Gregorian calendar uses weekdays. However, rather than seven days, it has 13 days, named from a sequence of 20 glyphs that you might compare to our use of Monday, Tuesday and so on. A complete cycle of this first calendar takes 260 days to complete – the same nine lunar cycles, or the human gestation period.

The Haab' indicates the solar year, counting a complete 365 days. This is divided into 18 months, each 20 days long, and another month with only five days. The Haab' has 19 glyphs representing the names of each month.

The Tzolkin and Haab' are used together to define a date. Much like how we would say Wednesday 1 January, in the Maya calendar it would read 10 Manik' (Tzolkin date) 15 K'ank'in (Haab' date). However, unlike our Gregorian calendar, the same date does not repeat every year but rather every 52 years – a period called the Calendar Round. There are 18,980 unique date combinations by the time the 52-year cycle ends. The date combinations were displayed by two concentric wheels, with the glyphs of the Tzolkin and Haab' marked on the inner and outer wheels respectively. Both wheels would rotate in opposite directions to form the different date combinations.

The Long Count calendar is used to keep track of longer periods of time, known as the 'universal cycle'. Our Gregorian calendar counts years starting from the estimated birth of Jesus Christ, but the Maya calendar uses a starting point much further back, equivalent to 11 August 3114 BCE. This was the date the Maya believed was the start of life. When specifying the current year, the Maya would record how many days, months, years, centuries and millennia have passed since the beginning of life. One cycle of the Long Count calendar lasts approximately 7,885 years. But, contrary to modern conspiracy theories, it does not signal the Maya apocalypse. It simply marks the beginning of a new universal cycle.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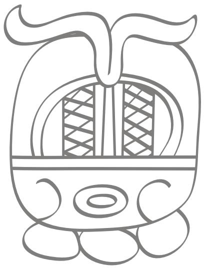
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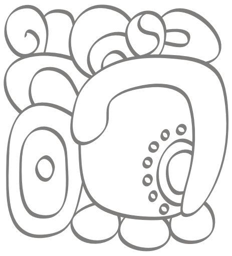
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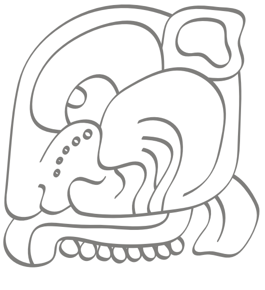
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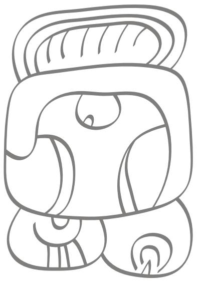
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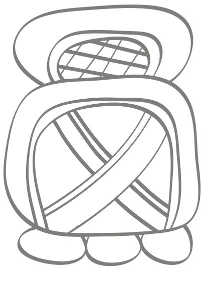

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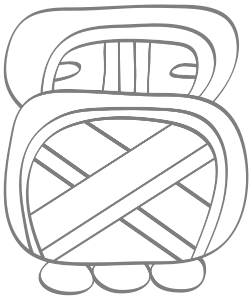

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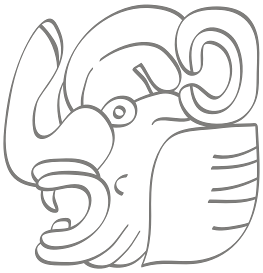

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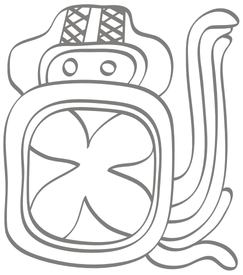

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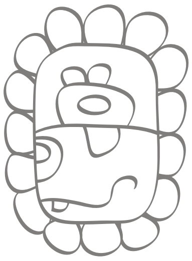

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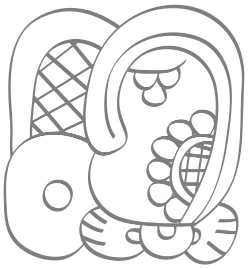

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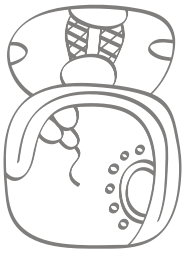

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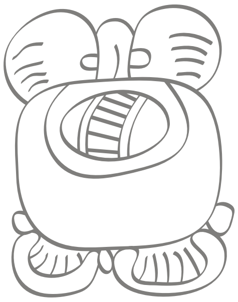

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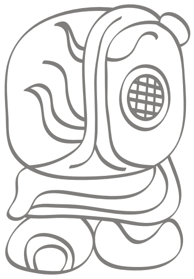

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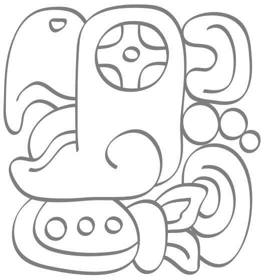
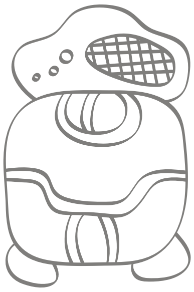


K'AYAB'



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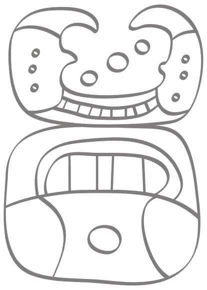

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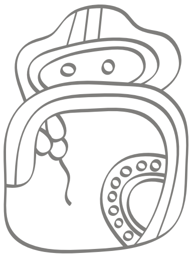

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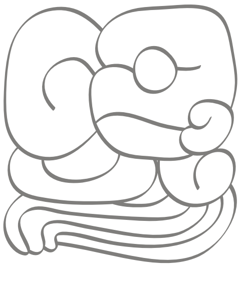


MUWAN

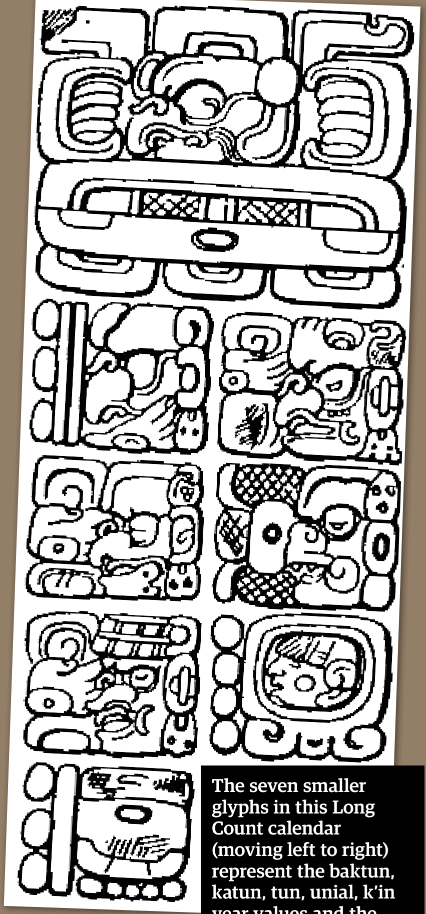
THESE ARE THE GLYPHS AND NAMES FOR THE 19 MONTHS IN THE HAAB' SOLAR CALENDAR

DOOMSDAY PROPHECIES

DID THE MAYA CALENDAR REALLY PREDICT THE END OF THE WORLD?

Much like our modern-day calendar sets milestones of time, such as a ten-year decade, 100-year century and 1,000-year millennium, the Maya devised units of time counting on from when they believed life began. A day was known as a 'k'in', and 20 k'in was called a 'uinal' (month). 18 uinal equalled a 'tun' (a year), and 20 tun was referred to as a 'katun'. Finally, 20 katun added up to a 'baktun' (144,000 days).

These measurements of time were also how the Maya recorded the year in the Long Count calendar. The Maya's mythical creation date was 13.0.0.0.0 (13 baktuns, 0 katuns, 0 tuns, 0 unials and 0 k'ins), and after a cycle of 13 baktuns, or the 'Great Cycle' – just over 5,125 years – the cycle resets. This led some to claim it was a Maya prophecy that the world would end at this 'reset' point, on 21 December 2012, despite the fact that no ruins or tablets studied by archaeologists indicate that the Maya themselves believed this. Clearly, the world did not end, leading us safely into the next 13 baktuns.



The seven smaller glyphs in this Long Count calendar (moving left to right) represent the baktun, katun, tun, unial, k'in year values and the Tzalkin and Haab' of the Maya 'creation' date

A 7th-century portrayal of a priest of the sun cult and a priest of the rain god making offerings to the ruler of Palenque

GODS SAVE THE KINGS

Impersonating divine jaguars, trampling on the bodies of defeated enemies and getting used to the itchiness of feather headdresses - these were just a few of the tasks assigned to the great Maya rulers. They also had to build cities of staggering architectural beauty and set aside a few hours to serve as a fulcrum of the cosmos

WRITTEN BY JON WRIGHT

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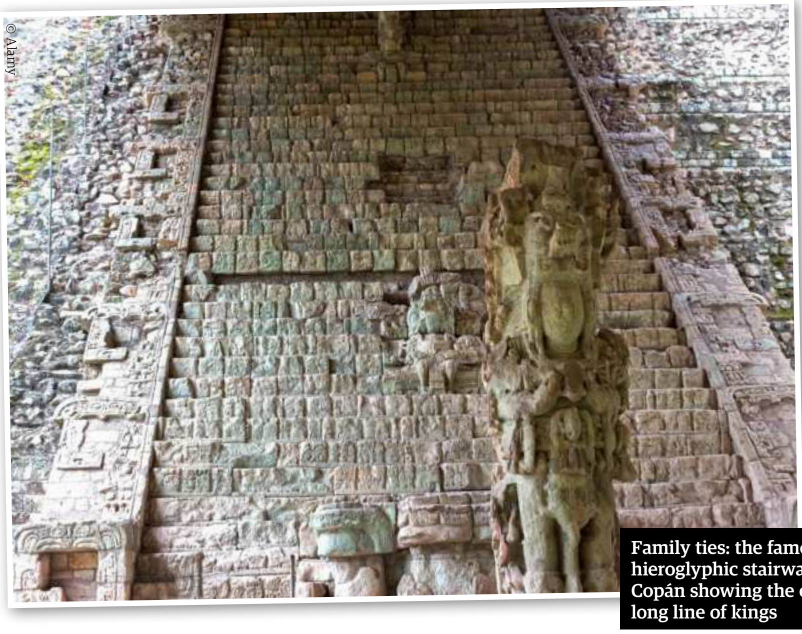
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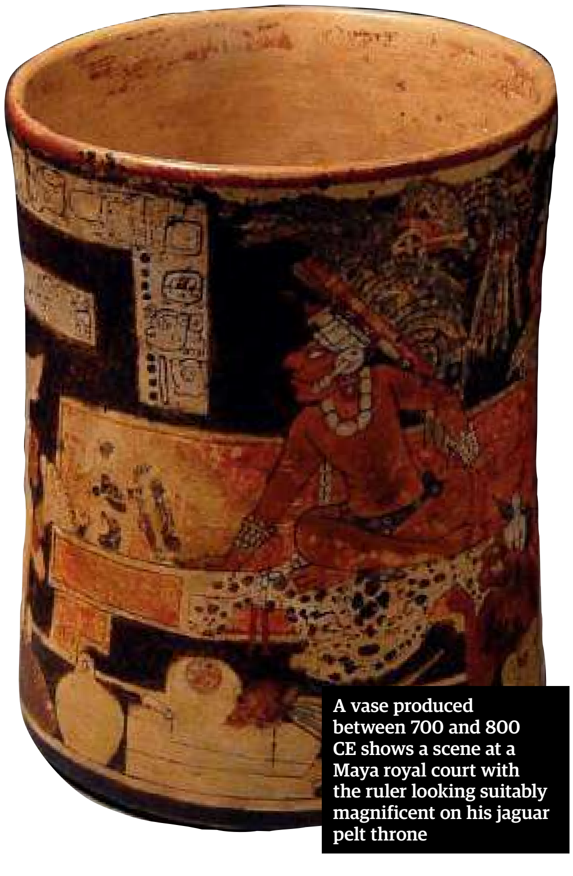
Family ties: the famous hieroglyphic stairway at Copán showing the city's long line of kings


A vase produced between 700 and 800 CE shows a scene at a Maya royal court with the ruler looking suitably magnificent on his jaguar pelt throne

"Out of the dark shadows emerged a fairy-tale sight, a fantastic and transcendental view of another world." Such was the stunned reaction of the archaeologist Alberto Ruz Lhuillier as he first entered the tomb of K'inich Janaab' Pakal in 1952. Pakal had been the ruler of the bustling Maya city of Palenque, located in present-day Chiapas, Mexico, from 615 until 683 CE.

The massive carved stone lid of his sarcophagus, located beneath the city's Temple of Inscriptions, explained that Pakal would first travel to Xibalba, the Maya underworld, then make good his ascent via the legendary World Tree. Pakal was suitably dressed for his odyssey. His skeleton wore a stunning death mask along with the finest jade collar, necklaces and rings. His sarcophagus displayed images of his ancestors and symbolism redolent of the Maya maize god, a figure who encapsulated the perpetual cycles of rebirth and renewal. Pakal's journey was far from being over, and a stone tube, heading out of the tomb, may well have been intended as a 'psychoduct': a conduit through which Pakal's spirit could venture upwards to encounter worshippers in the temple.

The Maya knew how to treat their dead kings, especially during the so-called Classical period (c250–c900 CE), and royal funerary sites were crammed with treasures and potent images: jade and pyrite artefacts, porcelain-like cowrie shells, turtle carapaces, stingray spines and cinnabar. But why was such attention lavished on these men? What were the wellsprings of their authority, and how did they help bring the institution of divine kinship to its zenith?

A PATCHWORK OF POWER

A coherent, unified Maya empire never existed. It was always a story of regional powers competing for influence and squabbling over subjects or satellite cities. Fortunes ebbed and flowed, and a good way to weather the storms was to establish an intimidating, preferably enormous stronghold. It used to be thought that the great capitals (the likes of Tikal, Calakmul and Copán) were primarily ceremonial sites – sparsely populated for most of the year. This analysis was well wide of the mark. By the later classical periods at least 20 cities had resident populations of 50,000 or more.

Rule, at least in theory, was patrilineal, passing from a king to his son, the b'aah ch'ok ('head youth'). Very occasionally, when it was the only way in order for a dynasty to survive, a woman or brother of the family might take the reins, but this tended to be disruptive. Not that we should be thinking in terms of single dynasties that ruled a city-state for 1,000 years. The Classic Maya did carefully number a city's kings: ruler 1, ruler 2, etc. The famous Heavenly Stairway at Copán epitomises this trend.

Comprised of dozens of steps and 2,500 stone blocks, it charted the sequence of 15 local kings from 426 onwards, all depicted through imagery and one of the longest Maya hieroglyphic texts. Not too far away, the richly decorated 'Altar Q' took the run of rulers up to 16.

However, in many places this would just have been an ideal of continuity, much like the carving on Pakal's tomb that imagines rulers as plants – cacao, guava and avocados among others – growing in the same single orchard. All too often, in fact, a family dynasty withered away or was brought to an abrupt end. The mighty rulers of Tikal, for example, claimed direct ancestry from the shadowy figure of Yax Ehb Xook (ruled c90 CE), but in the mid-4th century forces from the Mexican city-state of Teotihuacán decided to set Tikal on a different path. The general Siyaj K'ak' arrived and in 329 CE, either through military conquest or gentler methods, installed Yax Nuun Ahiin I (a relation, perhaps even the son, of the Teotihuacán ruler) as king. A new dynasty was born, but Yak Nuun would immediately be referred to as the city's 'ruler 15', giving the chaos that would inevitably have followed the overthrowing of a dynasty a semblance of order.

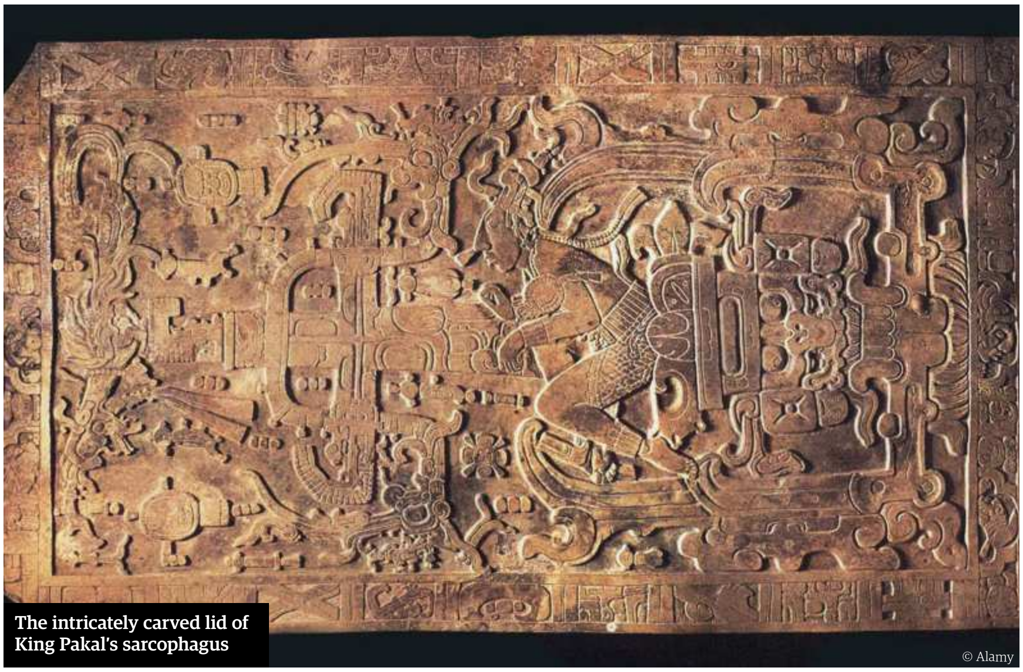
In such a milieu, sources of regal legitimacy came in various forms. Despite the interlopers and dynastic shifts, ancestry did remain important. Direct heirs would, when as young as five, go through a bloodletting ceremony to highlight their dynastic pedigree. In 658, in the city of Piedras Negras, the son of K'inich Yo'nal Ahk I (who had died 20 years earlier) entered his father's tomb. It was a smelly exercise (incense burned for five days to banish some of the stench) but an eloquent way of announcing that the family firm was still very much in charge.

DIVINE LORDS AND DECAPITATORS

More was sometimes required to bolster kingly authority, however, and there was no better place to look than the gods: powerful if fickle allies. And if all else failed, you could always send the troops in search of an astonishing victory or two.

The Maya saw the world as a hostile place, filled with threats of scarcity, natural disaster and puzzling supernatural interventions. If your king had a direct link to the gods and served as a privileged intermediary, your prospects of survival improved. If he was semi-divine himself – and the term k'uhul ajaw, or 'divine lord', was in widespread use – then so much the better. Maya kings were eager to advertise this status from the outset. At their installation ceremonies they would sit on jaguar pelt bolsters atop jaguar pelt carpets, with jade stones around their foreheads and corn shoot and quetzal feather headdresses completing the look. All of this paraphernalia carried diving symbolic references, but, just to hammer the point home, the new ruler might be treated to a human sacrifice before he went off to commune – usually in private – with the deities.

Something for the journey: the funerary accoutrements of King Pakal of Palenque



The intricately carved lid of King Pakal's sarcophagus

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Such ceremonial events continued throughout a monarch's reign. Kings would participate in ritual bloodlettings, with their blood supposedly feeding the gods. These were sometimes gruesome affairs: one of the famous Yaxchilán lintels shows a noblewoman pulling a rope lined with thorns through the king's tongue.

The personal link between kings and gods was compared to the relationship between father and son. In many places only the ruler was allowed to care for certain divine spaces: brushing it clean or ensuring there was a supply of offerings. One inscription at Palenque explains that the king "satisfies the hearts of his gods": the choice of possessive adjective is telling. On occasion, kings would simply lock themselves away in the most sacred parts of the temples, not eating for days but giving sustenance to the gods through their privations.

A host of other ceremonies accentuated links to the divine. Crops and water supplies would be blessed, year or cycle endings would be celebrated with gods and kings sharing the work of bringing new life to the cosmos. When victories were won, a dancing king would wear masks of the gods; if alliances were secured, two kings would dance together in their deity-impersonating finery. Even the names of rulers frequently had clear divine associations. The sun god and the creator god make regular appearances, sometimes joined by reference to patron gods linked to a specific city. The laurels in this regard probably go to K'ak' Tiliw Chan Yopaat, who ruled Quiriguá between 724 and 785. The likely translation of his title may sound rather bizarre to us – 'fire-burning, celestial lightning god' – but it certainly inspired awe in the 8th century.

This model of kingship was fundamentally charismatic, more dependent on inspiring devotion than on passing laws. And so long as things went well it could be very effective. If the droughts and famines stayed away, then the king was proving that his friendship with the gods was intact. A contented populace was willing to build the temples, fight the wars and pay the tributes. Unfortunately it might come crashing down: what if the rains never fell and the crops shrivelled?

A useful standby was military success. Heirs to the throne were expected to demonstrate military prowess from a very early age, and, while we can't know how frequently kings personally led their troops into battle, they were always eager to claim the credit. The lengthy names of Maya rulers often contained soldierly phrases – 'he of 20 captives' or 'first axe wielder' – and nothing provoked quite so much delight as the slaying of a rival ruler. In 738 the aforementioned K'ak' Tiliw Chan Yopaat of Quiriguá captured his overlord, the ruler of Copán, and ritually decapitated him.

The fragility of charismatic kingship also meant sensible Maya rulers were involved with the bureaucratic nitty-gritty of governance. They ensured water supplies continued to flow, constructing aqueducts and catchment infrastructures such as the reservoir at Calakmul, with its 200-million-litre capacity. They oversaw an equitable distribution of goods, worked hard to

A WHO'S WHO OF MAYA KINGSHIP

MAYA HISTORY IS FULL OF LEADERS WHO MADE A HASH OF THINGS AS WELL AS THOSE WHOSE DEEDS WOULD BE CELEBRATED FOR CENTURIES AFTER THEIR DEATH. HERE ARE SOME OF THE KINGS WHO STAKED STRONG CLAIMS IN THE LATTER CATEGORY

© H Grube

YAX NUUN AHIIN I

CITY: TIKAL

REIGN: 379-404 CE

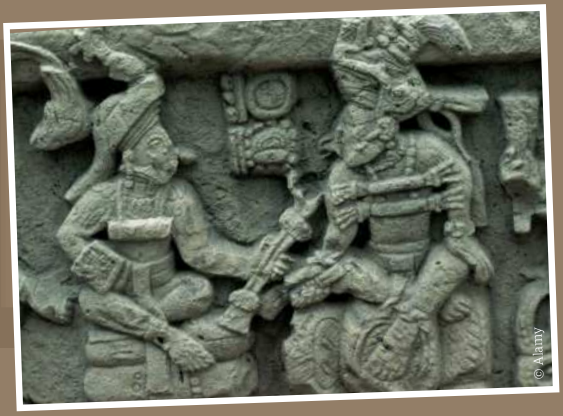
The man, also known as Curl Snout, supplanted the ruling dynasty at Tikal. His burial reflected the respect he had acquired: his tomb contained a xylophone-style instrument made from turtle shells and the corpses of ten sacrificed youths.

K'INICH YAX K'UK' MO'

CITY: COPÁN

REIGN: 426–435/7 CE

Founder of the city's greatest dynasty and proud owner of one the loveliest regal Maya names: 'Radiant First Quetzal Macaw'. The importance of being able to claim links to ancient forebears is demonstrated in this image, where K'Inich is seen passing the torch, literally and figuratively, to a later ruler.



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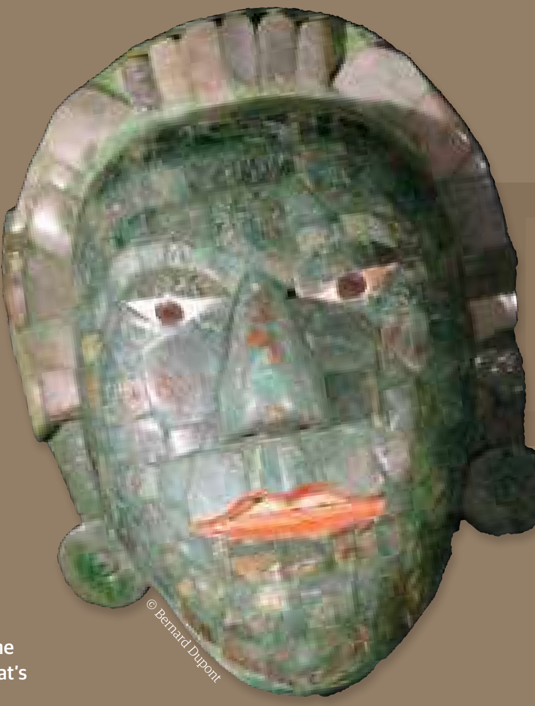
Q'UQ'UMATZ

CITY: Q'UMARKAJ

REIGN: C.1400–C.1425 CE

Probably the boldest of the K'iche' rulers, it was said that he could transform into a snake or an eagle or travel to the underworld. He certainly oversaw a period of groundbreaking territorial expansion.



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YUKNOOM CH'EEN II

CITY: CALAKMUL

REIGN: 636–86 CE

The death mask shows perhaps the most renowned of all Calakmul's rulers, who took full advantage of Tikal's decline to take control of vassal cities and exploit the familial disputes that plagued Calakmul's long-term rival.

K'AK' TILIW CHAN YOPAAT

CITY: QUIRIGUÁ

REIGN: 724–785 CE

Though usually of limited political influence, Quiriguá was one of the jewels in the crown of Maya architecture. Under Yopaat's rule it achieved autonomy from its overlord, Copán.

UAXACLAJUUN UB'AAH K'AWIIL

CITY: COPÁN

REIGN: 695–738 CE

Known as '18 Rabbit', he brought Copán to a peak of architectural splendour – including the construction of perhaps the finest Maya ball court. His reign ended badly: decapitation by the ruler of Quiriguá.

JASAW CHAN K'AWIIL I

CITY: TIKAL

REIGN: 682–C.734 CE

He helped drag Tikal out of the so-called mid-Classical hiatus and saw it reemerge as one of the most culturally alert and adventurous Maya cities.

© Alamy

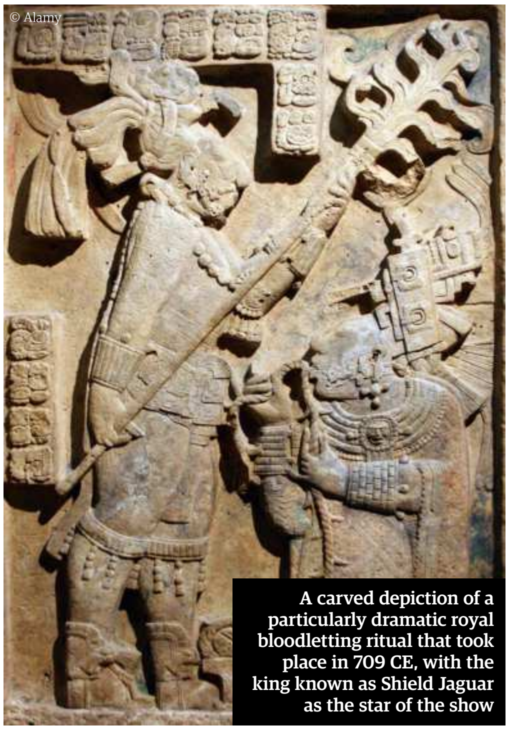
sustain trade relationships and tried to ensure a steady flow of rare, distant commodities such as sea salt. Ceremonial removal of hearts or comparisons to supernatural jaguars who rescued the Sun every night could only get you so far: full bellies were every bit as important.

BEFORE AND AFTER

On balance, kingship during the Maya Classical era was a success, though competition between city-states was common. Tikal and Calakmul were engaged in a perpetual tug of war between the 6th and 8th centuries – fighting over vassal cities, launching proxy wars and pitting brothers against brothers. Things got so bad for Tikal that between the 560s and 670s it was particularly hard hit by the mid-Classical hiatus. The city ground to a halt and not a single stela was erected. Tikal bounced back, however, signalling the model of Classical kingship was durable. But the hiatus can be seen as a precursor of the Great Collapse, originating in the 9th century, that ravaged the Maya. Problems with political instability, population numbers and food supply struck at once. The nature of government also came under scrutiny, a reminder that Maya ideas about kingship were fluid.

Take the Preclassical era, for example. It has often been assumed that rulers were more akin to small-scale chieftains. They certainly never achieved the ritualistic sophistication or closely defined divine attributes of the Classical era, but it turns out that they had a good deal in common with their more-celebrated successors. For one thing, cities in the 400–500 years before the Classical period – notably El Mirador, with a population of up to 100,000 souls – could reach a very impressive size. Their rulers were most definitely independent kings and sometimes took the title of 'ajaw' – a term usually associated with the post-250 CE Maya rulers. And just as coherent governance existed long before Classical times, so it endured – in tweaked or radically altered ways – after the great Classical collapse. It is very hard to trace this development, but one key question was repeatedly asked: was placing something very close to absolute power in the hands of a single ruler still the wisest option?

This was not an entirely novel conundrum. Kings had relied heavily on their officials and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A carved depiction of a particularly dramatic royal bloodletting ritual that took place in 709 CE, with the king known as Shield Jaguar as the star of the show

'Altar Q', discovered at Copán – another means by which the importance of ancestry and lineage was captured in stone

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The Palace of the Governor at Uxmal, a city-state that rose to prominence during and after the great Classical collapse

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advisers: they did not simply wander around their palaces barking orders. Ruling elites were very powerful and fought – just as tenaciously as kings – to pass their offices down through the family. It is not difficult to imagine the specific duties with which they were charged – diplomacy, ceremonial arrangements, financial matters etc. – but it is inordinately tricky to pin down the precise nature of portfolios, let alone the names of those who carried them. A council meeting was not quite as exciting a subject as a god, a battle or a spectacular ritual when you were producing carved images, eye-catching ceramics or hieroglyphic masterpieces. We do at least have recurrent titles that offer important hints. The 'sajal' crops up quite frequently and may have designated a subordinate lord or regional governor. 'Aj-k'uh-huun' means something like 'he of the holy books,' or 'he who venerates', which points to a priestly or perhaps astronomical role. Another term is easily translated as 'lord of the fire', but what on earth does that mean in terms of job description? We can be sure, though, that these elites were becoming increasingly assertive as the Classical era was coming to an end and the Postclassical world was beginning to emerge.

But was there a swift transition in governmental organisation in the city-states that replaced the likes of Tikal or Calakmul? Probably not. Scholars once agreed that Chichén Itzá, located in central Yucatán, adopted a model of council-based, shared rule. It now seems that older models of kingship endured for some time. In another emergent city-state, Uxmal, lasting dynasties had little opportunity to lay down roots, but dominant rulers such as Chan Chak K'ak'nal Ajaw were perfectly capable of acting like the Maya kings of old. In the next wave of city-states, debate about the lineaments of power continued. Mayapán, a long-standing polity that achieved tremendous power from the 12th century, adopted a confederate form of government, but bold, power-hungry figures often held sway.

In the impressive K'iche' kingdom based in the Guatemalan Highlands, everything was rather muddled, with rival lineages constantly at loggerheads. A much-needed dose of old-fashioned kingship – or something akin to it – arrived in 1400 when the ruler Quq'kumatz established a new capital at Q'umarkaj, a city whose name had an unfortunate meaning ('place of the rotten cane') but from which a final flowering of Maya culture and territorial acquisitiveness developed. 15th-century Q'umarkaj went through the motions of having representatives of the major lineages choose its rulers, but the city was, for all intents and purposes, a kingdom with an autocrat at the helm.

There was, in fact, still a good deal of promise in the millennia-old Maya civilisation, and other dominant city-states would certainly have sprung up. But, to everyone's surprise, the Spanish arrived and denounced the Maya as a backwards, superstitious people. They failed to realise that, back when Iberian societies were just finding their feet, the Maya had already established one of the most fascinating, artistically sophisticated civilisations in history. But that's the arrogance of 16th-century European invaders for you.

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CAPTURING THE MOMENT KINGSHIP

IF YOU DIDN'T ERECT YOUR FAIR SHARE OF STELAE, THEN YOU REALLY WEREN'T DOING YOUR JOB AS A MAYA KING

Carved stone columns, often erected in the vicinity of temples, can be found all across Maya territory. These so-called stelae are most closely associated with the Classical period. The first surviving example that deploys the Long Date calendar system was erected at Tikal in 292 and the last can be found at Toniná, dated 909. Similar constructions did, however, appear during the pre- and Postclassical eras.

Stelae are mines of useful information and their carvings reveal – in both imagery and hieroglyphics – royal names and deeds, family histories, religious symbolism and expressions of a particular ruler's achievements: a particularly popular trope is the heroic Maya king trampling on the bodies of his vanquished enemies. Unfortunately, many stelae have suffered from the ravages of time and weathering, but they remain one of the mainstays of archaeological research.

Though designed as statements of kingly authority – and most likely at the heart of various rituals – stelae also fascinate because of their fluctuating quality. Their creators were sometimes journeymen stone workers, but others were clearly highly skilled, innovative artists. Calakmul has a particularly high concentration of stelae (113 at last count) and some of those at Quiriguá are unusually tall, reaching up to ten metres.

THE CLASSIC PERIOD

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The Classic period witnessed the peak of Maya power

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Wander the ruins of an ancient city home to some of the finest examples of Maya art

36 CALAKMUL
Explore the temples of a city the jungle kept secret until the 1930s

40 TIKAL
Why was this sprawling metropolis abandoned by its people?

44 THE CLASSIC MAYA DECLINE
Discover why a host of Maya cities started to collapse just as the Maya reached their peak

50 CHICHÉN ITZÁ
Chart the rise and fall of this Wonder of the World

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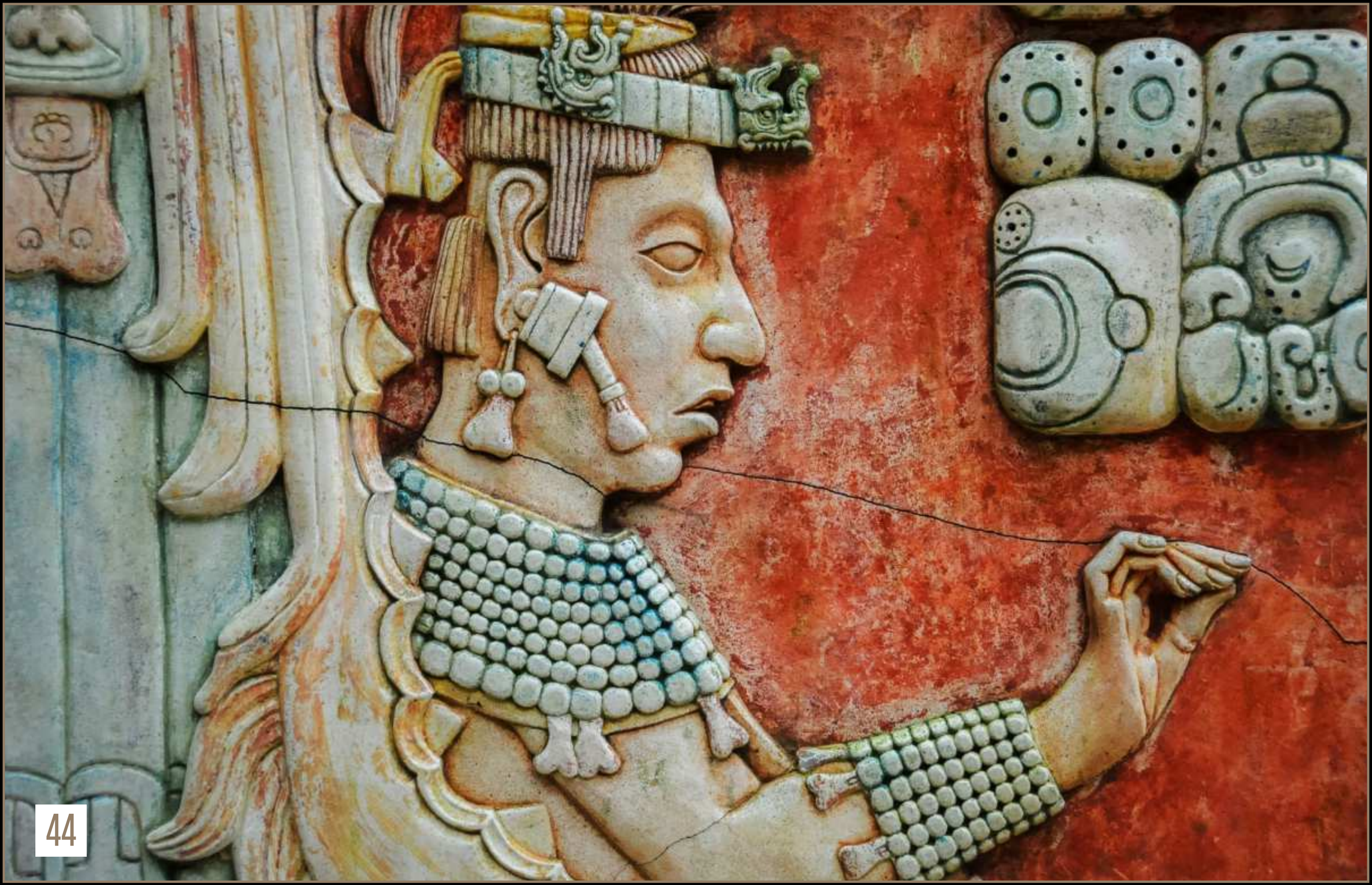
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A GOLDEN AGE

During the seven centuries of the Classic period, the architecture, culture and influence of the Maya flourished like never before

WRITTEN BY DOMINIC EAMES

The advance of the Maya civilisation mysteriously spluttered and stalled during the 1st and 2nd centuries CE. It seems the people stopped building new towns or abandoned the nascent cities that were already flourishing, like Kaminaljuyu and El Mirador, bringing an end to what is now called the Preclassic period. But the halt was temporary and the Maya never actually went anywhere. They would be back and become stronger than before, ushering in a golden age when their cities ballooned to immense sizes, their pyramids stretched higher and their art, language, culture and understanding achieved even greater degrees of sophistication.

The beginning of the Classic period (c.250 CE) saw a change in how the Maya would be understood by posterity, not least as it was then that it became widespread for the first time to construct monuments depicting the kings with a record of their names and dates using the Maya calendars. Cities emerged and expanded, each with populations ranging from a few thousand to as many as 50,000. Places such as Uaxactun (in modern-day Guatemala), Copán (today in Honduras) and Palenque (Mexico), to name a few, grew into important and powerful centres of the Classic Maya.

At the heart of these cities were plazas, around which the temples, palaces, homes of the nobility and ball courts would be erected. The most eye-catching structures were undoubtedly the pyramids, remarkable feats of ancient architectural engineering that still stand, poking out of the top of the rainforest canopy, as the defining sight of the ruins. They often reached as high as 30 metres, although some, notably the pyramid of La Danta at El Mirador, were double that.

To build them, the Maya hewed large blocks of limestone and stacked them using a form of mortar of mud. They then covered the rough yet imposing mound with stucco, a form of plaster, to give it a smooth surface that could be decorated with relief carvings, sculptures and (usually) red paint. The pyramids would then be topped by a temple or shrine to a god to be used in rituals and ceremonies, and they were also used as burial chambers, much like their counterparts in Egypt. Then, if the Maya ever felt like having a larger pyramid, they could be enlarged by piling more blocks on top and giving it a new layer of stucco.

So, huge city-states flourished during the Classic period, each their own sphere of power and influence, and as they grew, contact between them increased and trade networks were established. Connected by cultural similarities and language, Maya of different regions, sometimes huge distances apart, traded in prestige items like obsidian, jade, gold, cacao and feathers, as well as more everyday items like food, tools, clothing and salt. As there was no currency, the value of resources varied depending on the city-state.

Yet if contact promoted trade, it simultaneously led to warfare. Kings fought over resources, power and prestige, with an added incentive that captured warriors made useful slaves or sacrifices. Conflict was common, although no city-state managed to become so powerful that they were able to form a single, unified Maya empire, as seen in the other great civilisations in the Americas, the Aztecs and Incas. Instead, the strongest brought other cities under their influence as vassals, where they maintained a degree of independence in return for obedience. In the Classic period, the two 'superpowers' going round for round were Tikal and Calakmul.

Tikal, in the modern-day Petén region of Guatemala, enjoyed a rapid rise to political, military and economic power in the wake of the decline of Preclassic cities. Actually known to the Maya as Yax Mutal, the city boasted five pyramids, the largest being more than 60 metres tall, and the central district was 15 square kilometres. It is thought that it had as many as 3,000 structures.

Not too far away across today's border in Mexico was Tikal's rival, Calakmul. Even bigger, the city-state was home to the self-styled Snake Kingdom and a population of perhaps 50,000 people. Throughout the second half of the Classic period, Tikal and Calakmul waged the closest the Maya ever got to all-out war.

In the early Classic period, however, even these two states could not match the influence of another, a colossal metropolis in the far-off Valley of Mexico. Teotihuacán had expanded into the most-populated settlement in the Americas, able to support between 125,000 and 200,000 people, and wielded such power that it could cover the more than 965 kilometres to play a part in Maya politics. In 378, the king of Tikal died on the same day that Siyaj K'ak (meaning 'Fire is Born') of Teotihuacán entered the city, suggesting a hostile takeover. The influence of Teotihuacán can be seen in the records and ruins of other Maya sites.

The records also show the long dynastic lines that ruled in each of the Maya city-states. It was in the Classic period that carved monuments, or stelae, were adapted so as to include the name

Calakmul rose to be one of the most powerful Maya city-states, waging war with Tikal

Classic period

of the king depicted and the dates of their reign. Such statues existed in Preclassic times, but without hieroglyphics. The king, or ajaw, was at the centre of political and spiritual life – both a divine descendant of the gods and a warrior expected to lead his people into battle.

Under the king would be a small but wealthy upper class, made up of priests, officials, courtiers, military leaders and other members of the royal family. Like the king, they were regarded as a link between mortals and the gods so took part in rituals, even offering their own blood. Of paramount importance was to look the part, and not just with the fine clothing and jewellery they wore. The nobility made their bodies a status symbol by filing their teeth or having them inlaid with precious stones; covering their skin with tattoos or scars; and even stretching the skulls of their babies.

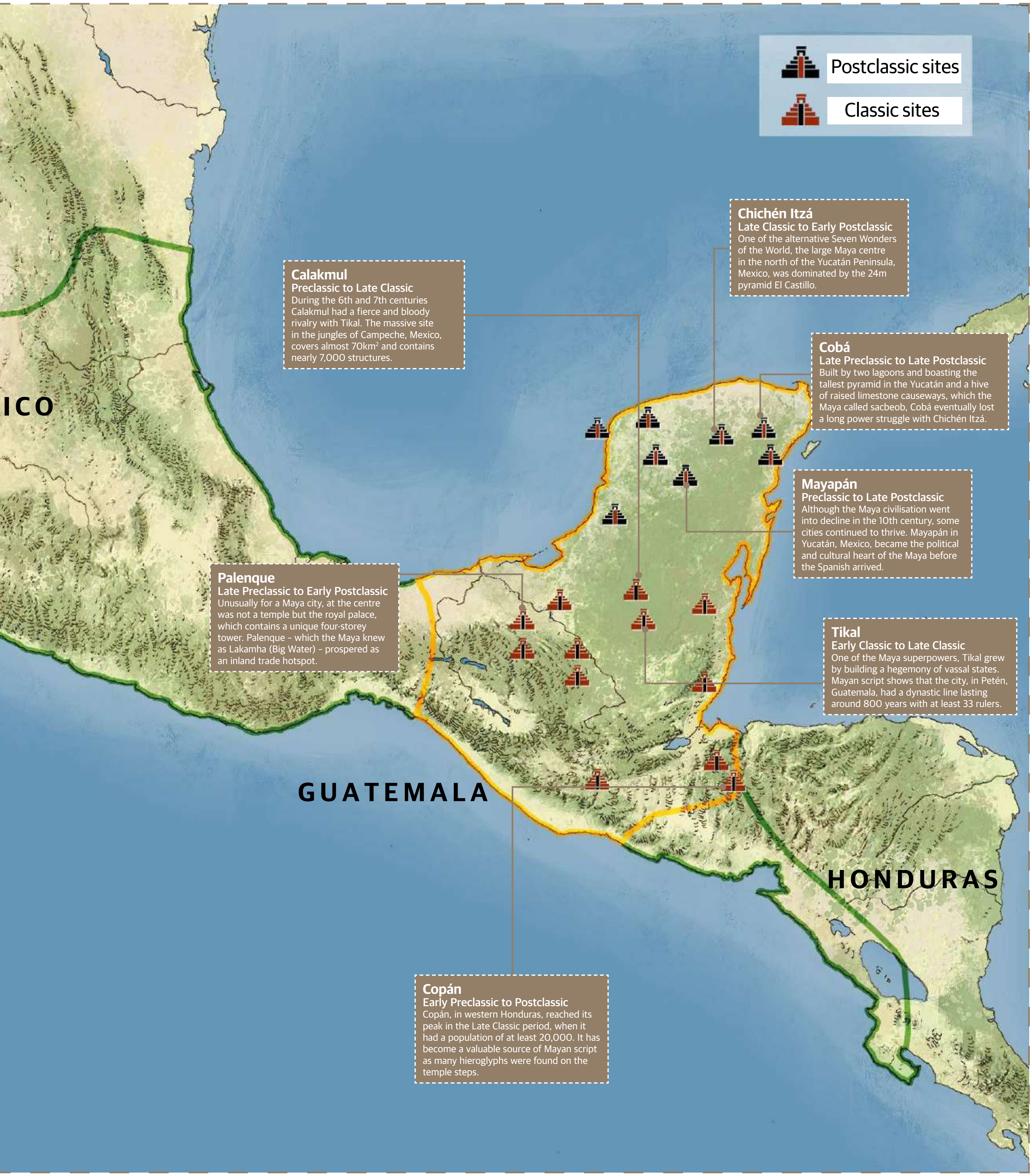
As the position of the nobility was hereditary, Maya society was rigidly established, with little opportunity for upward movement. A middle class of artisans and merchants did emerge thanks to trade and the blossoming of art during the Classic period, but most Maya were, and always would be, commoners working on the staple crops of maize, beans and squash. They would not have merited a mention in the texts that appeared during the Classic period.

The Mayan script, dubbed as hieroglyphs, became far more sophisticated during this time. The images would be carved into stone, moulded on the stucco or painted on the pottery – all of which has allowed knowledge of names and dates to survive the centuries – as well as being written on the paper made of tree bark that made up books. Only a handful of these codices remain.

The other development in the Classic period was in the form of calendars. The Maya were gifted mathematicians – even developing the concept of zero in a huge leap forward in numerical understanding – and astronomers who could calculate and predict the movements of the planets and celestial events. They combined two calendars: the Tzolkin (the 260-day sacred calendar) and the Haab' (a 365-day solar calendar split into 18 months of 20 days with five days left over, which the Maya considered to be a dangerous time of year). They could also work out the dates of events in the distant past or future using the 'Long Count' calendar, which had an origin in 3114 BCE.

The Maya of the Classic period, therefore, could be said to have had one eye on the past and one on the future, as they predicted the motions of the very heavens. This golden age of their civilisation similarly built on what had been achieved in the previous epoch and continued to rise throughout the following centuries until the arrival of the Spanish in the 16th century.

MEX
ATLANTIC OCEAN
PACIFIC OCEAN



Chichén Itzá
Late Classic to Early Postclassic
One of the alternative Seven Wonders of the World, the large Maya centre in the north of the Yucatán Peninsula, Mexico, was dominated by the 24m pyramid El Castillo.

Calakmul
Preclassic to Late Classic
During the 6th and 7th centuries Calakmul had a fierce and bloody rivalry with Tikal. The massive site in the jungles of Campeche, Mexico, covers almost 70km² and contains nearly 7,000 structures.

Cobá
Late Preclassic to Late Postclassic
Built by two lagoons and boasting the tallest pyramid in the Yucatán and a hive of raised limestone causeways, which the Maya called sacbeob, Cobá eventually lost a long power struggle with Chichén Itzá.

Mayapán
Preclassic to Late Postclassic
Although the Maya civilisation went into decline in the 10th century, some cities continued to thrive. Mayapán in Yucatán, Mexico, became the political and cultural heart of the Maya before the Spanish arrived.

Palenque
Late Preclassic to Early Postclassic
Unusually for a Maya city, at the centre was not a temple but the royal palace, which contains a unique four-storey tower. Palenque – which the Maya knew as Lakamha (Big Water) – prospered as an inland trade hotspot.

Tikal
Early Classic to Late Classic
One of the Maya superpowers, Tikal grew by building a hegemony of vassal states. Mayan script shows that the city, in Petén, Guatemala, had a dynastic line lasting around 800 years with at least 33 rulers.

Copán
Early Preclassic to Postclassic
Copán, in western Honduras, reached its peak in the Late Classic period, when it had a population of at least 20,000. It has become a valuable source of Mayan script as many hieroglyphs were found on the temple steps.

PALENQUE

Once lost to the jungle, this ancient city contains some of the finest art and architecture ever produced by the Maya

WRITTEN BY REBECCA FORD

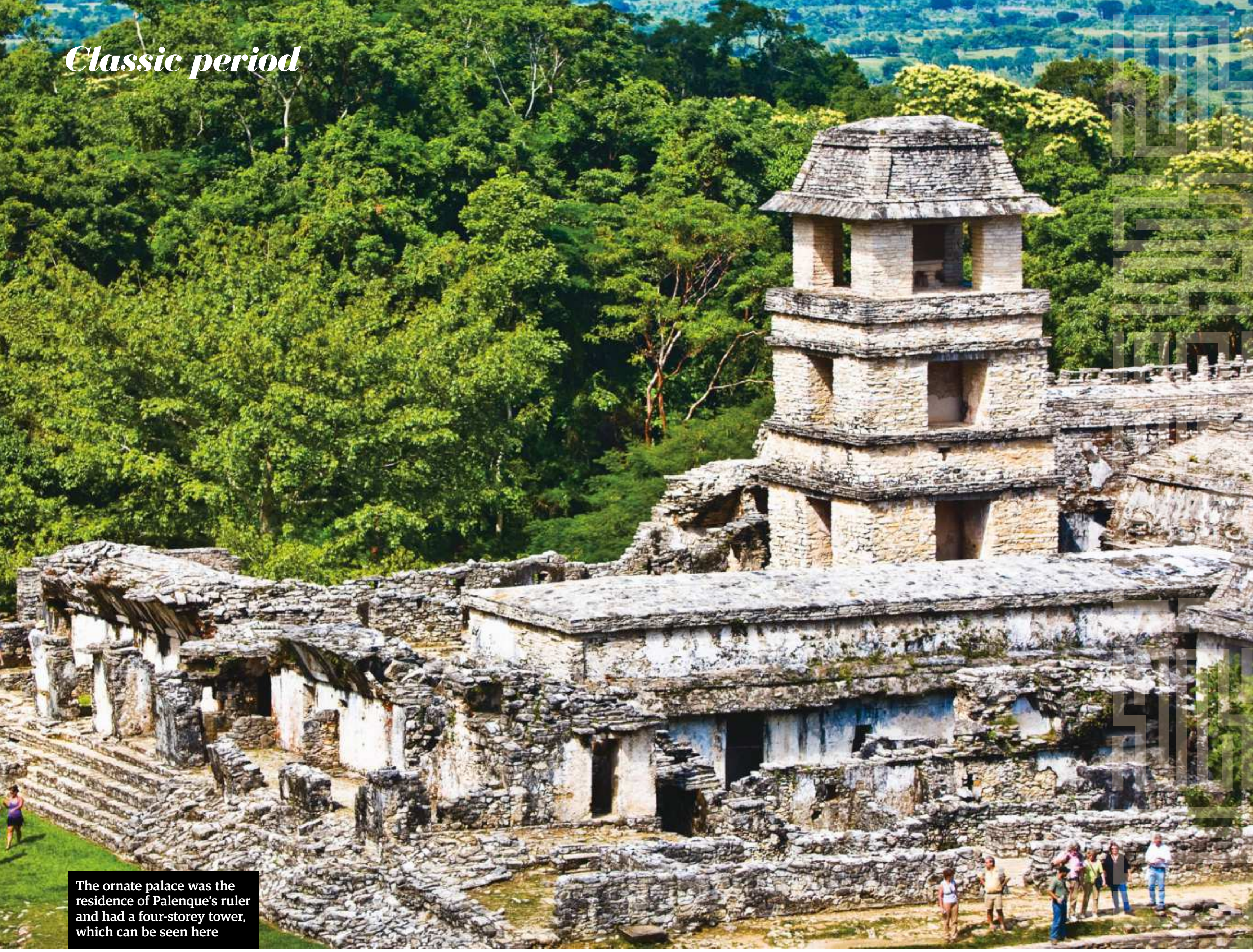
The Maya called it Lakamha, meaning 'Great Water', but we know it today by its Spanish name. Palenque was declared a UNESCO World Heritage Site in 1987 and attracts around 600,000 visitors a year. Situated in the state of Chiapas in modern Mexico, around 120 kilometres south of Ciudad del Carmen and near the Usumacinta River, Palenque was once the capital of the B'aakal kingdom, a regional political unit. It sits at the foot of the Chiapas highlands and looks out over the Gulf coast plain – a strategic position that helped it to grow and flourish as a trade centre. At its peak in the 7th century, Palenque's influence stretched right along the river basin and beyond.

The city was densely populated and had a planned layout, with residential and administrative buildings as well as magnificent temples and a grand palace complex. Built on different levels, with some temples standing on naturally occurring hills, the structures were made of local limestone with wooden lintels and would have been brightly decorated in shades of blue, yellow and red – red being the colour of the East, of fire and of energy. Palenque was a place of sophistication, with fine architecture, elaborate carvings, stucco work and indoor plumbing. But it was also a site of human sacrifice.

There is evidence that farming took place in this area around 100 BCE. However, construction of the city appears to have begun a few hundred years later. Inscriptions at the site suggest that the first king was Ku'uk' Bah'am, who reigned for four years from 431-35. However, little appears to remain from his era, for in 599 and again in 611, the city was attacked and sacked by neighbouring Calakmul. After a few years of decline, it was rebuilt on a grand scale by the most successful of all its rulers, K'inich Janaab' Pakal I – also known as Pakal the Great (r.615-83). He came to the throne at the age of 12 and very likely ruled with his mother, Sak K'uk', for a number of years. During his reign the city flourished and most of the known palaces and temples were built.

Work continued under his successors, his sons K'inich Kan B'alam II (r.684-702) and then K'inich K'an Joy Chitam II (r.702-721), who extended and remodelled structures, turning Palenque into the finest of all the Maya cities. Buildings were given height, light and elegance by the use of vaulted roofs, wide doorways and T-shaped windows. There were spacious courtyards, and structures were richly decorated with stucco and carvings.

The remains of many significant buildings can still be seen today and are impressive even in their ruined state. They include the palace, work on which probably started in Pakal's time and continued over several generations. A complex structure built on a raised platform, it served as the ruler's residence and was the focal point of the city. With internal courtyards, vaulted ceilings and a four-storey tower, it provided accommodation for a retinue of servants as well as nobles. It was provided with water via an aqueduct and came equipped with steam baths and toilets. The



The ornate palace was the residence of Palenque's ruler and had a four-storey tower, which can be seen here

> “AROUND 711 PALENQUE WAS SACKED AGAIN – THIS TIME BY ITS RIVAL STATE TONINA – AND THE THEN-KING WAS TAKEN PRISONER”

aqueduct was pressurised - the earliest known example on the continent.

Work on the magnificent Templo de las Inscripciones (Temple of the Inscriptions) probably began around 675. A step pyramid that was constructed to serve as Pakal's tomb, it has nine levels, which are thought to represent the nine levels of the Maya underworld. Pakal obviously wanted to be sure his tomb met with his satisfaction, as construction began during his lifetime. The name derives from the carved hieroglyphic inscriptions on the walls. Written in Maya text, they outline 180 years of Palenque's history, including key events in Pakal's life.

A short distance away is a group of temples known as the Temple of the Cross Complex, which was commissioned by Pakal's immediate successor, his son Kan B'alam. It consists of the Templo del Sol (Temple of the Sun), the Temple de la Cruz (Temple of the Cross, the largest of the group) and the Templo de la Cruz Foliada (Temple of the Foliated Cross). They are dedicated to three Maya gods and are rich in imagery and symbolism. Carvings of a cross that appear in some of the structures are a representation of the *Ceiba*, the tree that was believed to hold up the universe. Kan B'alam himself is represented, both as a child and later as an adult on his accession.

Other temples, tombs and residences are scattered across the archaeological site and extend into the jungle. Perhaps surprisingly, there are even the remains of a court on which the Mesoamerican ball game was played. This sport involved the use of a heavy rubber ball, which players struck with their hips. It was not only a recreational game but also had ritual aspects, even being associated with human sacrifice.

Around 711 Palenque was sacked again - this time by its rival state Tonina - and the then-king was taken prisoner. The city survived, but hostilities with Tonina appear to have continued. The glory days were over and, by the end of the 8th century, construction had ceased and Palenque was abandoned. Its lavish civic and ceremonial buildings were smothered by the jungle, not to be re-awakened until the 16th century, when the Spanish colonised the area. The first western explorer to find it was Father Pedro Lorenzo de la Nada, who named it Palenque, or 'fortification'. In 1567, he wrote the first published account of this lost city. However, it was not until the 1780s that surveys of the site began. In 1787 an expedition under the command of Colonel Antonio del Río investigated the ruins, his forces damaging some structures in the process. On the expedition was a surveyor and architect, Antonio Bernasconi, who drew the first map of the site and made a number of drawings of some of the sculptures.

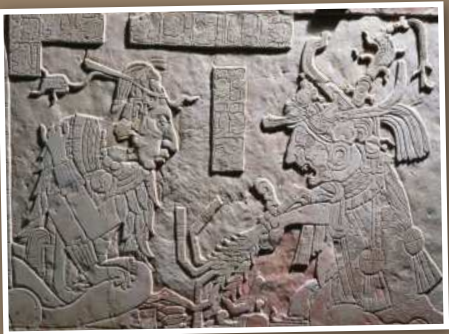
Over the years other explorers followed in their footsteps, making more drawings and maps and later taking photographs. In 1840 the explorer John Lloyd Stephens and his companion Frederick Catherwood, an architect and draftsman, spent about a month at Palenque carefully documenting structures, including several important temples. Considered the pioneers of Maya archaeology, they later produced an illustrated book on the site.

However, it was not until 1949 that excavations began in earnest. They were carried out by Mexican archaeologist Alberto Ruz Lhuillier, who realised that a stone slab on the floor of the Temple of the Inscriptions was designed to be raised. Beneath it was a stairway filled with rubble, which took several years to clear. Eventually, in 1952, he reached the bottom where, in a richly decorated crypt deep beneath the temple floor, he discovered the sarcophagus of Pakal the Great. The enormous stone lid was carved and depicted the ruler emerging from the jaws of the underworld, reclining on the mask of the sun god – presumably suggesting he had made the transition from life to death and had perhaps been reborn as a deity.

Further investigation revealed the remains of the king, who had been interred along with an elaborate jade death mask and a collection of jade jewellery. Outside the door to the burial chamber the archaeologist found the bones of several people – clearly sacrificial victims, slaughtered to accompany the ruler on his last journey. Later work revealed the presence of a 'psychoduct', which led from the tomb, along the stairway and out through a hole in the stone covering. It is still something of a mystery but might relate to the departing of the soul.

This was not the last discovery at the site. In 1994 a Mexican archaeologist working under Arnoldo González Cruz discovered another tomb within a smaller pyramid close to the Temple of the Inscriptions. Known today as the Templo de la Reina Roja (Temple of the Red Queen), it held the bones of more sacrificial victims, as well as a sarcophagus containing the remains of a woman who had been buried along with a collection of jewels. It was clearly the burial place of a woman of high standing, probably Pakal's wife. Her skeleton and other contents of the sarcophagus were covered with a bright-red dust made from cinnabar, the toxic ground ore of mercury.

The total archaeological area at Palenque extends 1,780 hectares, and 1,400 structures have been recorded. To date, only around ten per cent of those have been explored – the rest remain hidden beneath the jungle vegetation.

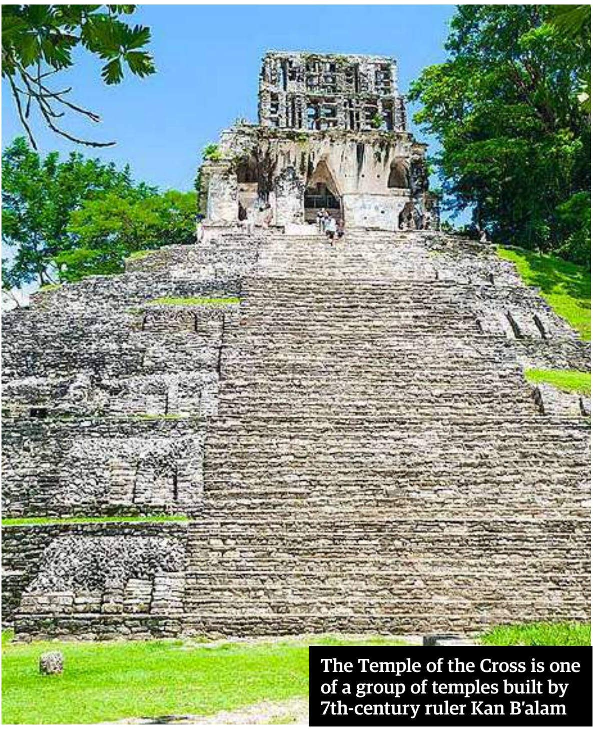


BEHIND THE MAYA CARVINGS

THE HIDDEN MEANINGS WITHIN MAYA ART

A carving in the Temple of the Foliated Cross celebrates the earthly realm and includes a depiction of maize, a plant that was so important in sustaining the Maya that they viewed it as sacred. One creation story held that humans themselves were created from maize. The maize god appears here in his foliated (leafy) form, but he could also be shown with a strikingly pointed tonsure, which echoed the shape of a cob of corn. Another temple at Palenque, known as the Temple of the Jaguar, contains a bas-relief carving of a ruler in the form of a jaguar and seated on a throne. Jaguars are immensely powerful cats and were thought to protect royalty and also to facilitate communication between the living and the dead. The Maya name for jaguar, 'b'alam', was even incorporated into the names of some of the rulers of Palenque.

A rather different carving appears in the Temple of the Inscriptions. It depicts Pakal's immediate successor, his son K'inich Kan B'alam II, held in the arms of his ancestors and being presented as heir to the throne. He appears as a mix of human and divine: one leg is a serpent, the other a normal human leg, though with six toes on the foot. This might have been a physical characteristic, as the extra toe also appears in later portraits. By linking themselves with deities and emphasising their dynastic succession, the Maya rulers astutely manipulated history and myth to political ends and boosted their claims to power.

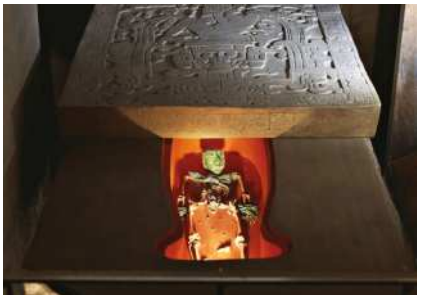


The Temple of the Cross is one of a group of temples built by 7th-century ruler Kan B'alam

THREE GREAT DISCOVERIES FROM PALENQUE

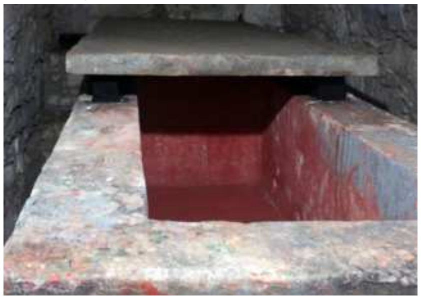
The tomb of Pakal

Had the archaeologist Alberto Ruz Lhuillier not lifted a stone slab from the floor of the Temple of the Inscriptions, this extraordinary tomb might still lie hidden today. It was found in 1952, deep below the temple.



The tomb of the Red Queen

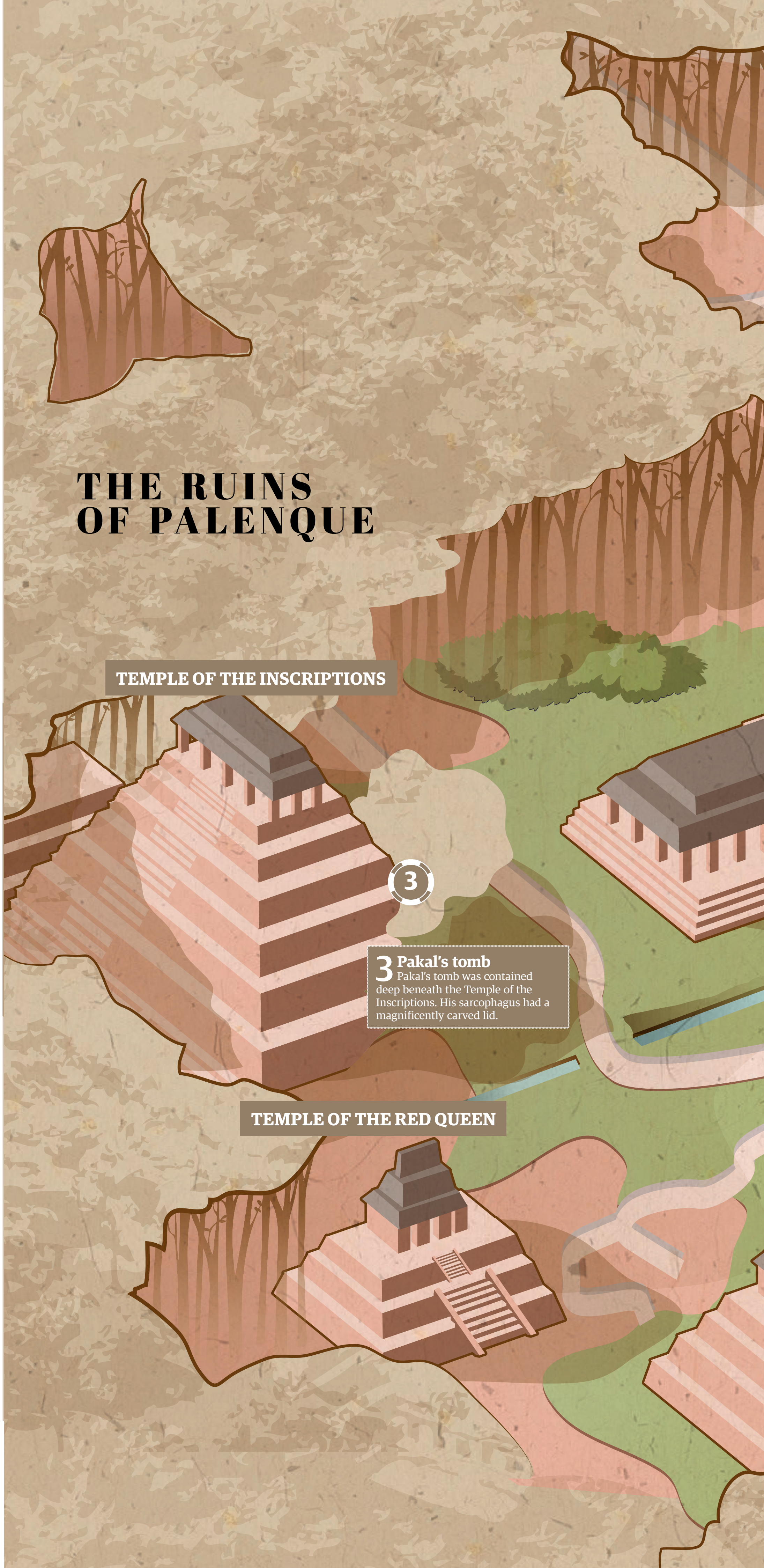
It was in 1994 that this tomb, probably containing the remains of Pakal's wife, was discovered. The contents of the sarcophagus were covered in cinnabar, a red powder. The colour red was associated with both power and energy.



Maya hieroglyphs

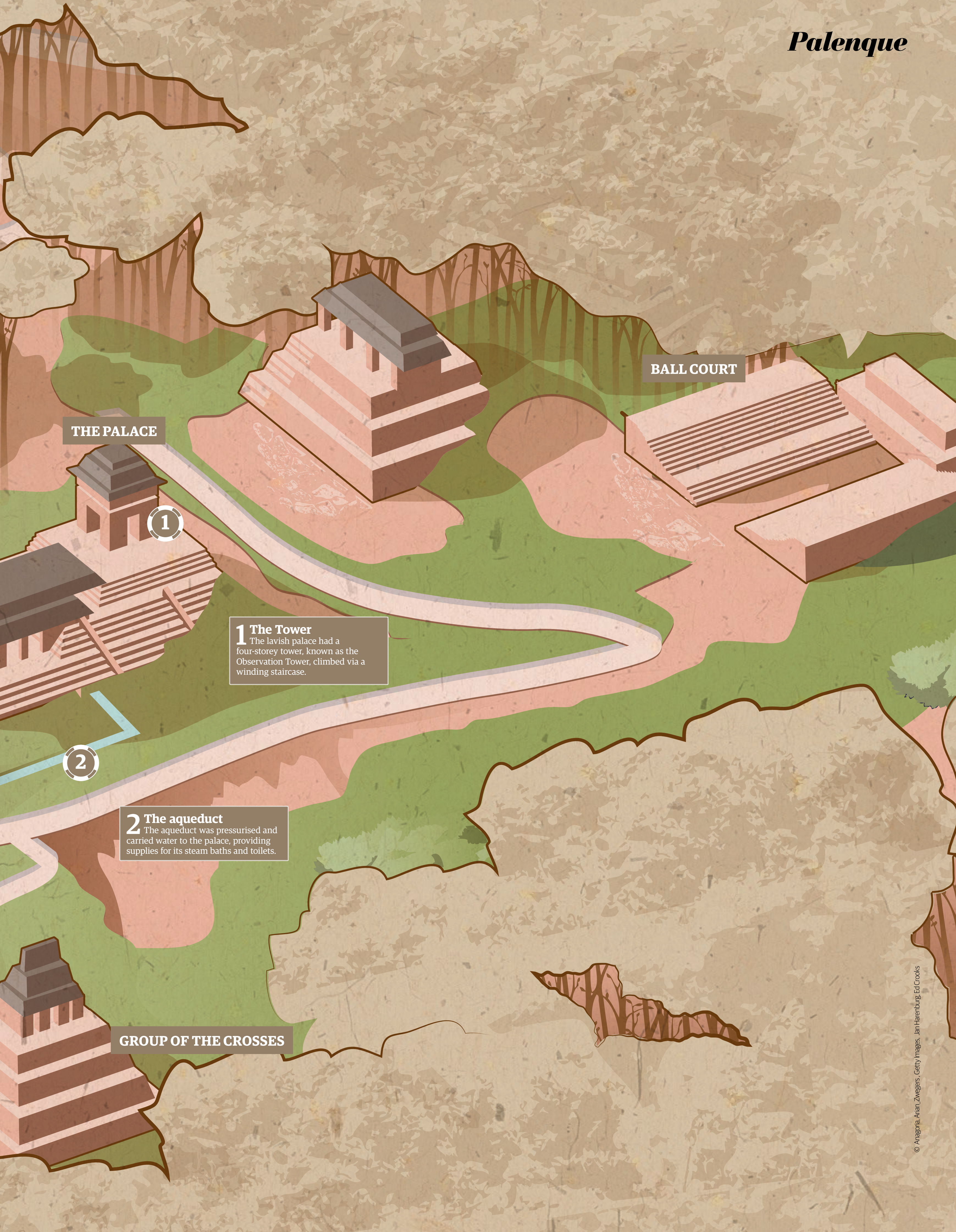
The Maya text that appears on the walls of the Temple of the Inscriptions has proved invaluable to academics researching this ancient culture.

THE RUINS OF PALENQUE



3 Pakal's tomb
Pakal's tomb was contained deep beneath the Temple of the Inscriptions. His sarcophagus had a magnificently carved lid.

Palenque


BALL COURT
THE PALACE
1
2
GROUP OF THE CROSSES

1 The Tower
The lavish palace had a four-storey tower, known as the Observation Tower, climbed via a winding staircase.

2 The aqueduct
The aqueduct was pressurised and carried water to the palace, providing supplies for its steam baths and toilets.

© Anagoria, Arian_Zwegers, Getty Images, Jan Harenburg, Ed Crooks

CALAKMUL

When an American botanist spotted what appeared to be man-made structures deep in the Mexican forest, it was the start of a most remarkable discovery

WRITTEN BY CATHERINE CURZON

When Cyrus L Lundell glanced from the window of his aeroplane in 1931 as he passed over the lowlands in Campeche, he was stunned to see a vast Maya ruin laid out beneath him. It was he who named it Calakmul ('City of the Two Adjacent Pyramids'), and it was a city with a rich history.

Though Calakmul is believed to date back to the Preclassic Maya period, its origins are sadly lost to time. Who exactly built it, and why they built it, remain a mystery, though there can be no doubt from the city's sheer scale that it was constructed to demonstrate success, wealth and power. At its height, Calakmul was vast, with 50,000 citizens housed over 20 square kilometres and served by a complex system of waterworks and buildings, while among the 6,750 structures catalogued at the site is one of the tallest Maya pyramids ever discovered. There can be no doubt that this was intended to be a centre of civilisation, and as the decades passed the new inhabitants simply built up higher and higher until the city towered above the canopy.

What little is known of the early history of Calakmul has been mostly assembled from references found at other sites, and the first comes in 529, when hieroglyphic texts suggest that Calakmul was the centre of the Kaan dynasty, or the Snake Kingdom. The kingdom got its name thanks to the snake symbol that was carved on glyphs displayed at cities that were part of the kingdom's domain.

Under the stewardship of the Kaans, Calakmul became a powerful administrative centre, exercising control over its surrounding lands and towns. Today, many of those tributaries can still be seen from the higher points of the city, giving a distinct impression of the way the centre of the kingdom would once have overlooked all those whom it controlled.

The city itself was laid out in a manner intended to invoke awe as visitors entered. Passing through agricultural land, they would then find themselves in the residential area. As they drew closer to the governmental heart of the city the architecture and delicate limestone structures grew more elaborate, with plateaus topped by stone pyramids and immense carved stone staircases ushering visitors into the centre of the city. At its heart was an immense pyramid of almost 50 metres, which dominated the landscape for miles.

Residents were well served by a network of canals and reservoirs that fed water to even the most outlying areas, while stone paths created streets and walkways by which to navigate the city. Life here was advanced, and people enjoyed the best of Maya modern living, achieving a level of sophistication that might seem surprising to modern visitors.

Calakmul wasn't the only Maya superpower in Campeche, and for decades it was locked in an ongoing power struggle with its equally strong neighbour Tikal. In 562, this exploded into violence when Tikal's ruler, Wak Chan K'awiil, made an attempt to invade his neighbour. The attempt failed, and Calakmul's king, Sky Witness, had his adversary sacrificed before claiming Tikal for the Snake Kingdom.

Sky Witness, however, could not live forever, and following his death rulers came thick and fast. The expansion of the city and its powers continued apace as pretenders to its throne were defeated and dispatched, their wealth added to

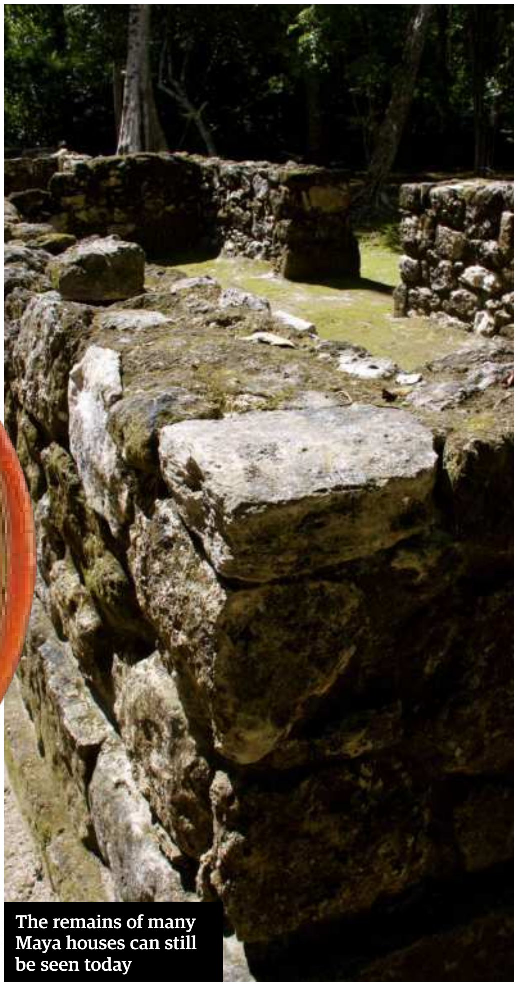
> “JUST AS ITS EARLY HISTORY IS LOST, SO TOO IS THE FATE OF CALAKMUL”

that of the ever-glittering Calakmul. Opponents weren’t chosen at random either, but for the access to trade routes that they commanded, for Calakmul was a centre of commerce in addition to government.

Calakmul is particularly interesting, though, because it didn’t only defeat and plunder its enemies - its rulers knew the power of a strong alliance too. In fact, many of its strongest ties came not via conflict but diplomacy, and it sat at the heart of a web of alliances that commanded the region. Let there be no doubt, however, that the rulers of Calakmul had any hesitation when it came to conquest, as the sacrificed king of Naranjo would be quick to testify.

It’s believed the city owes its monumental scale to King Yuknoom Che’en II, known as Yuknoom the Great, who came to the throne in 636. Just over a decade later, Tikal attempted to subdue its neighbour again and once again was defeated. But this time Yuknoom Che’en didn’t sacrifice its recalcitrant monarch, B’alaj Chan K’awiil, but allowed him to continue ruling as a puppet of Calakmul. It was one of the king’s

This remarkably well-preserved Maya plate is made from terracotta and is one of many that have been found in the ruins of Calakmul


The remains of many Maya houses can still be seen today

Generations of Maya constructed immense structures by simply adding new layers onto existing buildings until they evolved from simple structures into towering pyramids

more shrewd moves, as it ensured that his sabre-rattling neighbour next door was kept in line going forward. He also presided over dynastic marriages and alliances, and after 50 years on the throne, when Yuknoom Che'en died, Calakmul's importance could not be overstated.

Yet, as with all things, even the strongest city could fall. Just as its early history is lost, so too is the later fate of Calakmul. Experts agree that something happened, but exactly what that was they cannot be sure. However, by 693, paintings exist that show envoys from Calakmul kneeling before the throne of Tikal, and just two years later the territories were once again at war. The respective kings of Calakmul and Tikal clashed in an almighty conflict, and for Calakmul the outcome was disastrous. The once all-powerful overlord was defeated, and as the years passed the influence of Calakmul began to decline at a rapid rate. By 724 it was no longer a centre of government and power, instead ruled by a puppet of Tikal in a reversal of the situation that had occurred many years earlier.

With the decline in power came a reduction in hieroglyphic records, and depictions of events in Calakmul after its conquest become sparing at best. Though it remained a military power, its alliances were less numerous and far less influential – the once-unstoppable state now diminished in the eyes of its neighbours.

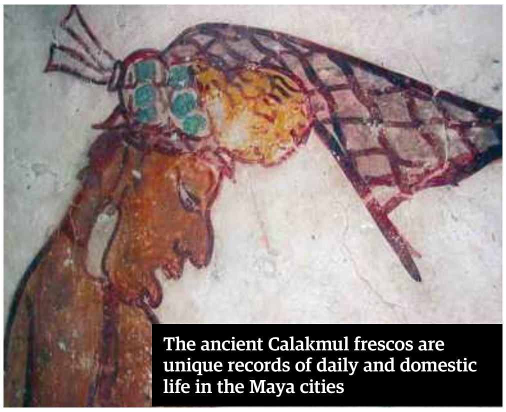
With its strength waning drastically, the vast site shrank. Modern archeologists have found no late-period Maya artefacts in the far-flung urban settlement areas, only in the centre of the site at what was once the governmental heart of the state. This clearly indicates that the outer reaches of Calakmul were no longer occupied at all and that inhabitants were concentrated in a much smaller area. However, excavations have revealed precious metals and jade from this era, suggesting that at least some wealthy inhabitants remained. Sadly, a lack of any records means that who these people were remains a mystery.

When Calakmul emerged from the canopy of the tropical forest in 1931, Lundell reported his discovery to Sylvanus Morley of the Carnegie Institution of Washington. Morley, an inveterate cataloguer, travelled to Campeche and began mapping the site. He found multiple complete or damaged stelae (wooden or stone slabs erected as monuments) and, pieced together with others found in the area, they told the fragmented narrative of Calakmul. After the institute departed in 1938 the site lay undisturbed until 1982, when William J Folan of the Universidad Autónoma de Campeche arrived. He was to stay at Calakmul for 12 years and uncover thousands of structures and artefacts, including a number of funeral masks.

Today, Calakmul sits at the heart of a Biosphere Reserve that protects 7,000 square kilometres of jungle and community-owned and farmed lands. A UNESCO World Heritage Site, the limestone remains there are being preserved in situ thanks to groundbreaking nanotechnology that might have implications for sites of similar value and fragility around the world.

Despite 117 stelae surviving at Calakmul, the use of soft and easily eroded limestone means that many have become indecipherable over the centuries

This open area is actually a ball court and can be found in the northern plaza of the Great Acropolis



The ancient Calakmul frescos are unique records of daily and domestic life in the Maya cities

© Getty Images, Wiki: Ant Mela, Elelicht, PashiX, Pete Fordham, PhilipN

TELLING THE STORY OF CALAKMUL

The history of Calakmul is one that is told through its contemporary artwork, much of which sadly didn't survive generations in its remote location.

To learn of the upper classes and rulers archaeologists and historians have turned to the Calakmul stelae, of which 117 remain. These are Maya monuments in the form of stone columns on which images are sculpted that tell of the history and achievements of the city. Just as Calakmul is one of the largest Maya sites still standing, its collection of stelae is the largest in Campeche and proves that it was one of the few Maya cities that had female rulers in addition to male.

Many of the stelae that can be found at Calakmul are in matching pairs, depicting kings or rulers and their spouses, but, unfortunately, time has eroded much of the detail that was once visible on these limestone carvings. Although the Calakmul stelae illuminate the most celebratory aspects of the city, to tell its full story archeologists have needed to look to other cities, particularly Tikal, Calakmul's long-time adversary. Here, they have found other carvings telling of Tikal's own victories over Calakmul, thus allowing them to piece together a fragmented narrative of the frequent clashes between these two Maya superpowers.

For those more lowly citizens, depiction on a stelae was unthinkable. Calakmul does, however, contain a number of murals that show everyday life for the people who lived there. These are not the lofty achievements of empire-building monarchs but street scenes showing markets and the comings and goings of those who used them. They are a unique and valuable artefact and reveal a side of Maya civilisation that has often gone unrecorded and unremembered. After all, for every conquering king sitting on his throne, there were thousands of men and women at the market.

TIKAL

One of the world's most important Maya sites, Tikal is situated in the heart of a jungle noted for its rich biodiversity

Deep in the Guatemalan rainforest lie the ruins of a magnificent Maya city; a pre-Columbian site of commercial, cultural and ceremonial significance that was once home to possibly 90,000 people yet was abruptly abandoned in 900 CE. Situated in Petén province around 300 kilometres north of Guatemala City, Tikal – known to the Maya as Yax Mutal – evolved over centuries from a simple village into a sophisticated centre, one that showcased the technological, artistic and intellectual achievements of Maya society. Many suggest that the area was first settled at least as early as 600 BCE, as there is evidence of agricultural activity at that time. It became an important regional hub and has a great lineage; construction of pyramids and other structures had already begun by c.350 BCE.

The site had some geographical limitations – there was no natural running water supply for instance, so rainwater was collected in specially constructed reservoirs. Different building phases resulted in a vast city of temple pyramids, palaces, ceremonial platforms, administrative buildings, monuments, residences and even some recreational ball courts, where the locals could play the Mesoamerican ballgame – a sometimes-violent game in which a hard rubber ball was struck with the hip. Much of the terrain was swampy, so important hubs were linked by ramps and paved causeways. Structures were made from local limestone and were often decorated with stucco and bas-relief carvings. The Maya used wood, typically from the native sapodilla tree, to make lintels for temple doorways, embellishing them with elaborate carvings. One depicts a woman of high status wearing a woven dress, a feathered headdress and jade jewellery.

The city has an immensely complex history. It grew prosperous as a trading centre, the inhabitants exploiting the natural resources of the surroundings and also clearing suitable land in order to grow crops such as maize. Its fortunes waxed and waned over the centuries, reaching its artistic and cultural peak between 600-900 CE. But Tikal did not always enjoy the benefits of peace, as it was frequently embroiled in conflicts with neighbouring states.

In 378 CE it came under the control of mighty Teotihuacán in the Valley of Mexico, around 1,000 kilometres away. Although some think the two merely had close diplomatic and trading ties, carvings on a stone column, or 'stela', suggest that Tikal was invaded, the king executed and a ruler from Teotihuacán installed in his place. There was a consequent influence on the city's art, architecture and even dress.

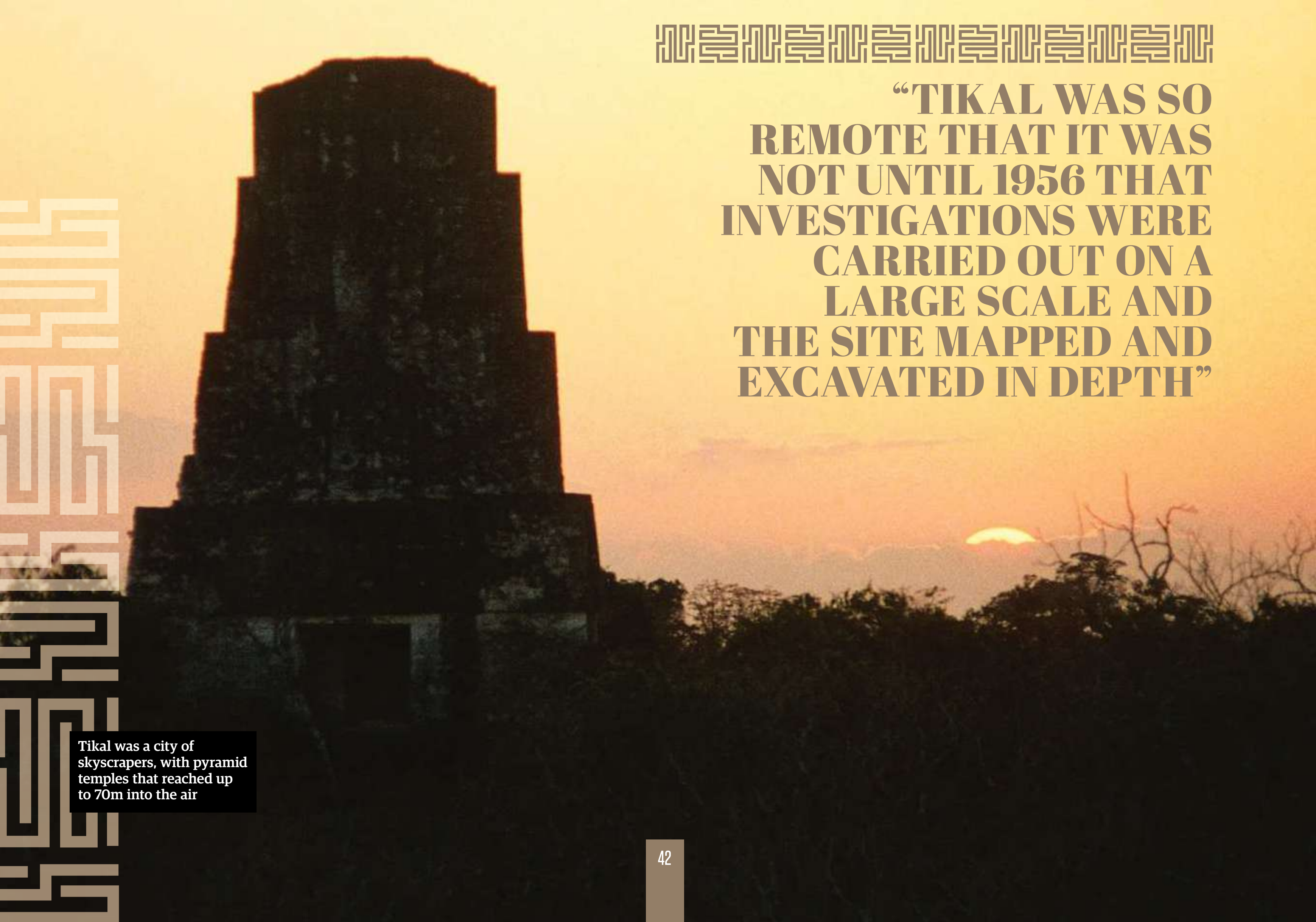
Tikal was not crushed though – in fact, its sphere of influence expanded and it soon conquered smaller neighbours. Teotihuacán became an important trading partner. However, in the mid-6th century there was further conflict; Tikal was defeated by an alliance of its two great rivals, Calakmul and Caracol, and it lost its regional dominance. Gradual decline appeared inevitable, but in 682 CE a new ruler, Jasaw Chan K'awiil II (682-734 CE), took the throne, and the city's fortunes were dramatically revived. He was one of the most important of all Tikal's rulers, defeating Calakmul and making his mark upon the city by initiating a substantial rebuilding programme. When he died he was entombed in one of the most impressive structures visible today, a mighty temple pyramid.

Known today as Temple I, it was originally topped with a decorative 'roof-comb', a common feature on Maya monuments, which in this case was embellished with a sculpture of the king. His tomb, discovered in 1962, contained jade and shell ornaments as well as pots with offerings of food and drink. There was also a large number of bones incised with extraordinarily delicate and detailed images. One, for example, showed a standing captive with bound wrists and knees; another depicted the maize god being paddled in a canoe, together with a supernatural parrot, a dog, a spider monkey and an iguana.

At its peak, Tikal must have presented an awe-inspiring sight. Generations of rulers built, rebuilt, expanded and improved it, resulting in a sprawling city (around 3,000 structures have been noted) with a monumental urban core. This was studded with pyramids that soared towards the Sun, stone skyscrapers in the jungle that could reach the extraordinary height of 70 metres. At its heart was a Great Plaza, which was bordered by two vast temple pyramids and two complexes, the North Acropolis and Central Acropolis. Construction at the North Acropolis, a royal burial site, dates back to 350 BCE. It grew in size over the centuries as pyramids were erected, along with numerous altars and stelae. Excavations revealed tombs filled with grave goods, including ceramic vessels, jade jewellery, shells, beads and even a musical instrument made from turtle shells. Archaeologists also found the remains of human sacrificial victims.

Other building hubs include the Lost World Complex, at the heart of which is the Lost World Pyramid, a stepped structure that eventually reached a height of 31 metres. It is the oldest in Tikal. To its east is a platform topped with three small temples. Together they formed an ancient observatory; a stairway on the main pyramid provided an observation point, while the temples were placed to align with the sunrise at the equinoxes and solstices. The complex was also used for elite burials. Then there is the Plaza of the Seven Temples, a complex that, as well as the eponymous temples, contained a large administrative building and an unusual triple ball court.

Maya cities gradually declined during the 8th century CE, and Tikal was no exception; building slowed, the population moved in from the outskirts and became concentrated in the central zone, and agriculture intensified – to the extent that the land and its resources were overexploited. By around 900 CE it was effectively abandoned and reclaimed by the jungle. It was not until the 17th century, when accounts of its existence began to appear in print, that the western world became aware of this lost city. In 1848, two local officials accompanied by an artist visited the site and produced an illustrated account of their findings. They were soon followed by other explorers and archaeologists. However,

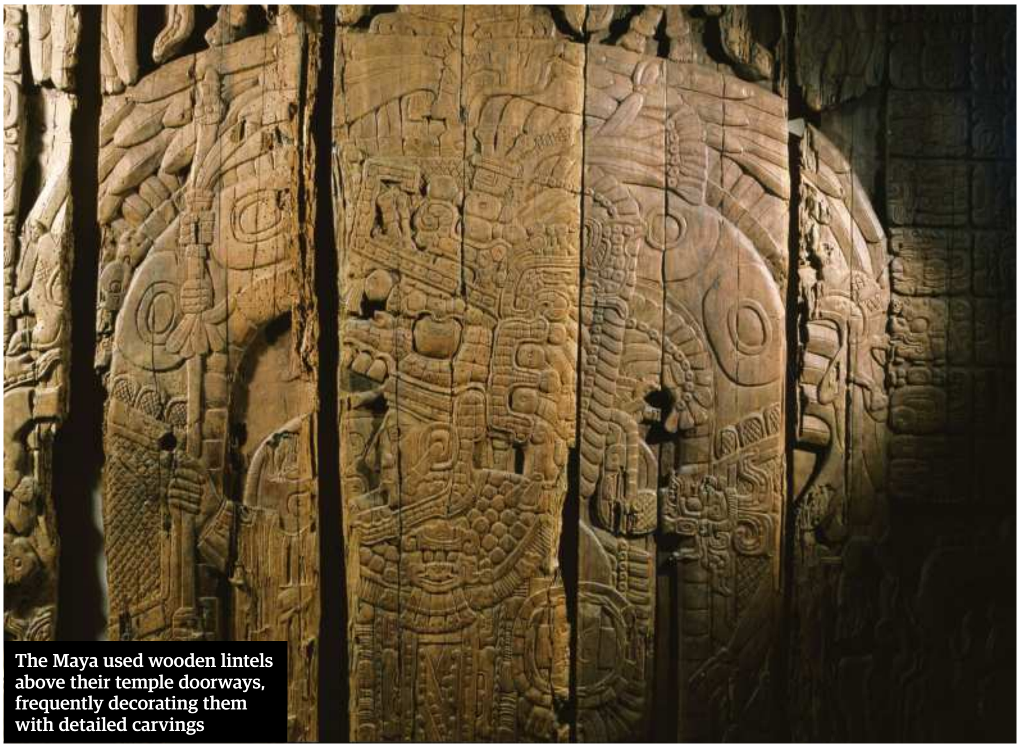


"TIKAL WAS SO REMOTE THAT IT WAS NOT UNTIL 1956 THAT INVESTIGATIONS WERE CARRIED OUT ON A LARGE SCALE AND THE SITE MAPPED AND EXCAVATED IN DEPTH"

Tikal was a city of skyscrapers, with pyramid temples that reached up to 70m into the air

Tikal was so remote that it was not until 1956 that investigations were carried out on a large scale and the site was mapped and excavated in depth.

Today the ruins of this once-mighty city are surrounded by forest of such exceptional biodiversity that they form part of the Tikal National Park, a UNESCO World Heritage Site covering 57,600 hectares. There are wetlands, savannah, tropical broadleaf and palm forests, and the land is home to orchids, bats, monkeys, anteaters and hundreds of different species of bird as well as five species of cat: the jaguarundi, margay, ocelot, puma and, most powerful of all, the jaguar. This ancient Maya city may have been lost for centuries, but it has certainly not lost any of its magic.



The Maya used wooden lintels above their temple doorways, frequently decorating them with detailed carvings

THE DESERTION OF TIKAL

The abandonment of Tikal is something of an archaeological mystery. Along with other Maya cities in the southern lowlands of Mesoamerica, it declined rapidly during the 8th and 9th centuries. Their populations eventually collapsed completely, leaving once-thriving centres to be reclaimed by the jungle for no apparent reason. Theories to explain this phenomenon range from military invasions, loss of trade and even disease epidemics, to climactic change and ecological disaster. In the case of Tikal, it is thought that a combination of factors might have been responsible.

Overpopulation certainly seems to have been an issue, as people moved into the central zone to escape conflicts in the surrounding area. This concentration of people would have led the Maya to adopt a more intensive system of agriculture, causing deforestation, exhaustion of the fragile soils and erosion. Agrarian failure would have forced inhabitants to leave the city.

However, there is an increasingly strong body of evidence to suggest that climate change, in the form of extreme drought, was the root cause of Tikal's ruin. Even mild droughts would have had an impact, as the city had no running water supply and was reliant on rainwater to meet its needs. More severe water shortages would have had serious consequences. There is still much more work to do, and the scholarly arguments are sure to continue for many years to come.

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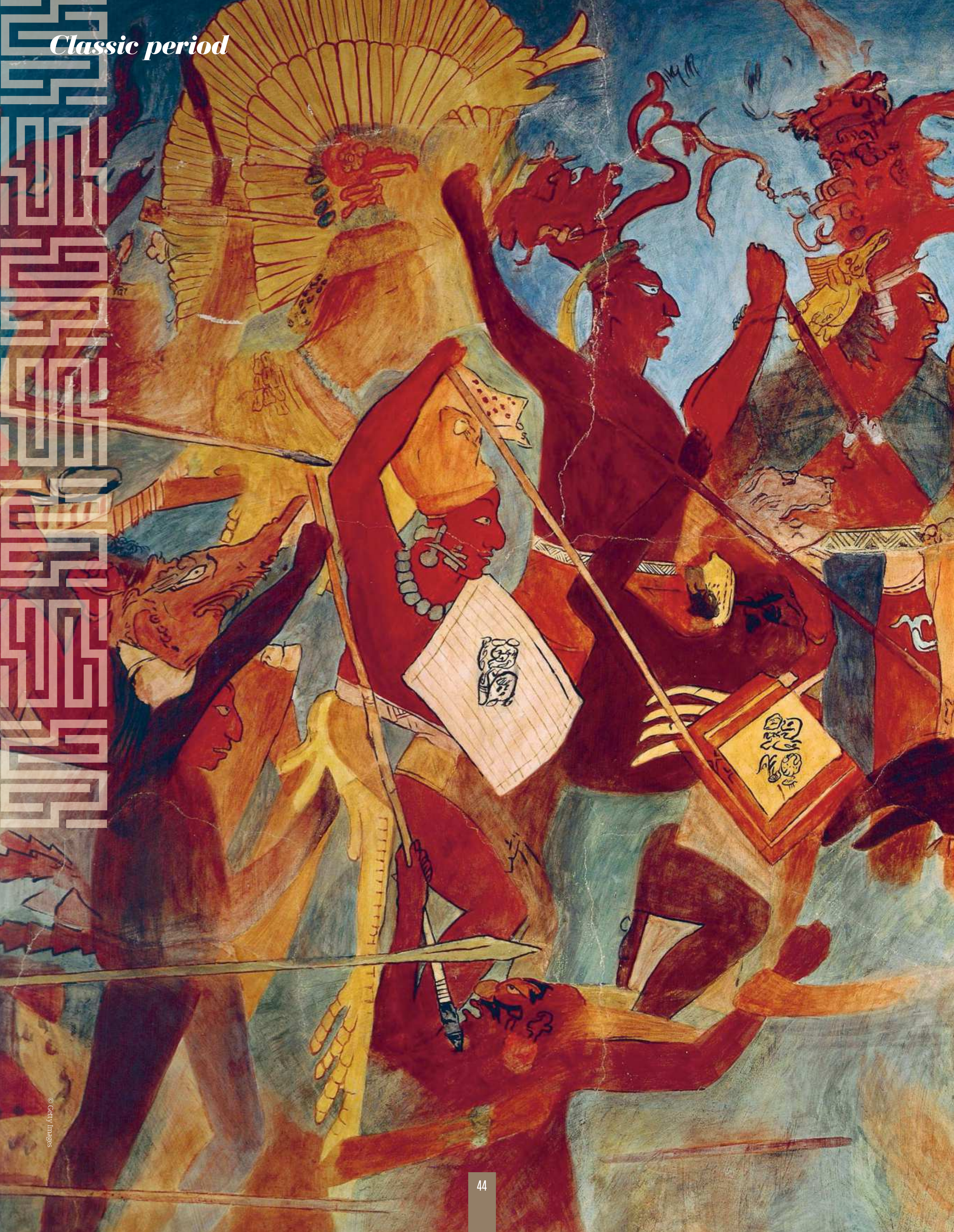

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THE CLASSIC MAYA DECLINE

Just as the Classic Maya reached its magnificent zenith, all across the southern lowlands of the Yucatán Peninsula polities began to topple beneath their own weight

WRITTEN BY HARETH AL BUSTANI

While the Maya civilisation began as early as the 2nd millennium BCE, it truly came into its own during the Classic Period, starting from 250 CE. Trade networks sprouted across Mesoamerica, linked by sprawling urban centres, where kings projected majesty with magnificent temples, intricately adorned stelae, sweeping plazas and ornate palaces.

By the time of the Classic Maya's cultural, infrastructural and socio-political peak in 750, city-states such as Tikal housed upwards of 60,000 people. These mega-cities maintained their own regional spheres of influence, with secondary cities and villages scattered along their peripheries. The result was a complex web of colossal city-states, secondary cities and villages, concentrated largely in the southern lowlands of the Yucatán Peninsula.

In regional Maya cities, such as Tikal, Calakmul and Caracol, power proved to be a precarious beast, held by a quasi-divine king who surrounded himself with a bureaucracy of nobles and elites. In previous centuries, Tikal and Calakmul had waged war over access to coveted trade routes. Curiously, these regional cities formed in the absence of natural water sources, and with annual rainfall as low as 170 centimetres, had instead come to depend on artificial reservoirs for the their water.

Many of their subjects were scattered across patchwork hinterlands of farmland. These pockets of fertility were spread out in a manner that was impossible to control, leaving them in the hands of peasants themselves. Instead, the rulers monopolised something every farmer needed in abundance: water.

While the king of Tikal maintained six artificial reservoirs, Caracol had two, bleeding out into the surrounding 130 square kilometres of terraced hillsides. Set amid low-lying swamp, Calakmul, meanwhile, had 13 reservoirs. These were placed in strategic and symbolic locations in the magnificent central plaza, in addition to alongside temples and other monuments.

They were a force of magnetism for farmers, who were spread too thin to mobilise their collective labour to produce and maintain their own large-scale water management systems. During the annual dry season from January to May, peasants were pulled from the outskirts into the civic centre. In this fashion they were anchored to regional powers and integrated somewhat into the local hierarchy through labour, rituals and rites.

While the surrounding farmlands were too scattered to control, holding a monopoly over water supplies enabled rulers to collect tribute in the form of labour, goods and food, which further integrated the highly mobile farmers into the social fabric of their centres.

This exchange formed the basis of the social contract between ruler and subject, one that was reinforced and legitimised through elaborate religious rituals held in the great plazas and sumptuous feasts enjoyed in the palace's inner courts and throne rooms.

During the dry season the hinterlands surrounding city-states such as Tikal were sustained and nourished by the city's central reservoirs

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Elaborate temples, hieroglyphic stairways, ball courts and stelae all served to further emphasise their legitimacy. As semi-divine figures, the rulers were also expected to procure rainfall, with religious rites dedicated to deities such as the rain god Chac, alongside ancestors and various other supernatural powers. Failure to do so was more than just a crisis of leadership - it would be the ultimate failure. In short, water was the Maya currency of power.

Due to a lack of rain, the region's farmers were only able to produce enough food to meet local demand, producing no surplus for export. As populations continued to balloon, this placed ever-greater strain on local resources, pushing farmers to clear and burn down more forest for farmland. Over thousands of years, the Maya had learned to adjust the land to their needs, digging small ponds and reservoirs and landscaping seasonal wetlands to hold more water. While terraced farming helped to reduce some precipitation and nutrient loss, the southern lowlands had now reached a critical mass.

Increasing Maya farming resulted in overexploitation of already exhausted land. Deforestation not only reduced local precipitation but left soil prone to erosion during heavy tropical rains, further devastating the land. It also lowered local fish, animal and mollusc populations, while wiping out sources of timber and fuel. Soon, the soil simply did not have enough nutrients left to sustain local needs.

The Maya had survived several droughts before, but a sustained dry period from 530-650 had dealt a severe blow to progress, stalling monument construction, before reaching the Classic peak. However, this new pinnacle coincided with global climate change, which saw the world become cooler and dryer.

A great drought struck in 750, marking the start of a 250-year period of aridity, one that would tip the already overstretched southern Yucatán lowlands over the edge. While powers in the north and those situated along rivers were able to cope, in the south water systems began to fail and rulers found themselves unable to fulfil their ends of the great social bargain. As famine took hold, desperate farmers took to planting high-yield produce like maize. This was a very thirsty crop, and further soil erosion and degradation of fertility rendered these efforts futile. Last-ditch farming also drew labour away from the kings' monumental prestige projects, further eroding their legitimacy.

Eventually the farmers began to flee, severing their ties with the city-states that could no longer sustain them. With hungry mouths came weaker immune systems, and though there is little evidence of widespread deaths due to famine, increased infant and adult mortality rates were likely. Yellow fever may have been introduced either by monkeys, or mosquitos breeding in water storage containers, further decimating the population. The region would be struck by droughts again and again in 810, 860 and 910.

Situated next to a river at the foothills of the Chiapas mountains, the powerful city-state of Palenque loomed over a fertile valley. While canals drained water out to the hinterland, where farmers maintained small-scale irrigation networks, the king derived his power from his access and control over jade and obsidian trade with the highland regions. However, overexploitation of the land and resources pushed the locals to the brink.

On top of its environmental woes, Palenque had also suffered a pair of successive defeats at the hands of Toniná, a smaller secondary centre located 65 kilometres to its south. Toniná had even captured the Palenque king, rocking the royal house's very foundation. In the midst of the chaos, Palenque was hurled into infighting, with opportunistic strands of the ruling dynasty making bids for power. Chaos is always a harbinger of opportunity, and before long servant would rise against noble, noble against king, and king against king.

Thus, the sporadic, mosaic fabric of the Maya civilisation began to dissolve. The various city-states had never been truly united into a greater empire or state. Not only did this encourage predatory warfare, but as the entire region became strained, the individual polities were incapable of pooling their resources to overcome their collective strife. Each became increasingly susceptible to over-farming, over-hunting, disease, ecological degradation and religious violence. As they began to devolve powers to dissatisfied lords, this only further eroded their precarious power base, creating confusion and instability.

With Calakmul struggling and sensing an opportune moment of weakness, another predatory Maya group - perhaps the Putun from the Gulf Coast of Tabasco - attacked it. Cracks were now growing into fault lines, shaking apart the power centres of the southern Yucatán. Stone monuments were mutilated, with elites' faces scratched out and those of peasants left intact - others depicted nobles standing over peasants, indicating that deep-rooted class conflict was also coming to a boil. Images of war became more commonplace, suggesting an increasingly violent environment amid a time of great upheaval.

The peasants may also have been stirred up into revolt by an ancient order of priests, who continued to practice separately from the religious hierarchy. Amounting to just five per cent of the population, the elites had long exploited their subjects, and as they swelled in number and opulence, becoming needier and greedier, the proletariat grew fed up. Archaeological evidence suggests peasants' skeletons were smaller and less developed than those of the elites, indicating that in the process of meeting the nobility's feasting

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The city-state of Palenque was dealt a crushing blow to its prestige by the secondary centre of Toniná, who captured its king

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THE 'MAYA COLLAPSE'

THOUGH THE CITY-STATES OF THE SOUTHERN YUCATÁN LOWLANDS WERE ABANDONED, THE MAYA CULTURE AND ITS PEOPLE ENDURED

While 'collapse' is used to describe the decline of the Classic Maya period, the word is a problematic one. For starters, modern Maya living to this day may find it an offensive word, loaded with imperialistic preconceptions of progress, civilisation, superiority and development. Although the population of the southern Yucatán certainly declined, relocating elsewhere, the Maya culture itself has continued to this day. The 16th-century Spanish conquest did more damage to the civilisation than the decline of the southern Yucatán. Many Maya actually fled back to the forests of the region during the conquest.

Similarly, not all Maya settlements were equally affected - many not only survived but thrived in the aftermath. What truly collapsed was the socio-political system that governed the region's greatest city-states. With rulers and elites increasingly unable to fulfil their social contract, the notion of divine kingship began to crumble. As the façade of royal power toppled it dragged down the societal hierarchy and economic system it presided over.

As an added consequence, the great monuments, hieroglyphics, inscriptions and other cultural and architectural works of the Classic Maya peak ceased to be produced. However, the Maya traditions, beliefs, ceremonies and religion remained in place. Power was simply negotiated on a smaller stage, with autonomous communities deciding to care for themselves.

"BEFORE LONG SERVANT WOULD RISE AGAINST NOBLE"

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THE CURRENCY OF POWER

MUCH OF MAYA LIFE REVOLVED AROUND WATER, WHICH NOT ONLY DETERMINED WHERE BUT HOW PEOPLE LIVED

With very few lakes and rivers serving the southern lowlands of the Yucatán Peninsula, the seasons dictated the flow of life. Settled areas were marked by the presence of bajos, or seasonal swamps, and aguadas – ponds that formed when karst sinkholes were plugged with clay sediment. The Maya expanded these using earthwork or clay dikes to aid in agriculture, plaster manufacturing and construction.

Cities themselves were designed as water-storage hubs, concentrated around their central reservoirs. Tikal, like many powers, was built on a hill and at its heart was a great reservoir – an old limestone quarry lined with clay or plaster and used to collect and store water in the wet season before funnelling it down through the residential zones and fields via gravity.

At Tikal, a network of reservoirs held up to 900,000 cubic metres of water – enough to meet the daily needs of 62,000 people. Crucially, the Maya learned to keep their water clean by creating artificial wetland biospheres. Pondweeds, plants and bacteria removed phosphorous, nitrates and harmful microorganisms. Water lilies, for example, not only block out light, preventing algae build-up and slowing evaporation, but also provide cover for natural predators of pests, such as dragonflies and fish. Only able to flourish in clean water, water lilies became a fitting symbol of royal might, adorning stelae and other monuments.

While the Maya had endured droughts before, during the Classic peak the southern Yucatán reached critical mass, and fault lines began to emerge

© Getty Images

requirements they were malnourished. The elites held a monopoly not only over water and military might but knowledge of mathematics, literacy, astronomy, engineering and even religion. However, that meant very little without the labour of their farmers, traders, artisans and religious specialists.

To make matters worse, the southern Yucatán economic network was dealt a further blow by the shift from inland to seaborne trade. Producing little surplus food, the city-states of the region and their subsidiary satellites were dependent on long-distance trade of sacred prestige goods. Green jade, quetzal feathers and pyrite poured in from the highlands, while conch shells and stingray spines were hauled from the coast. Many an alliance had been forged and a war fought for access to these vital lifelines, with such goods playing a crucial role in the elite's projection and rituals of power.

From the Caribbean and Central America to the Gulf of Mexico and Central Mexico, the southern Yucatán had formed a super-highway, facilitating the flow of goods. Once again, the loss of this trade placed increasing strain on the kings' abilities to manage their forests, clear land, build monuments, launch raids or defend themselves. An exodus of peasants, artisans and craftsmen left en masse in search of new opportunities and masters to serve.

In Copán and Palenque, elites found the increasing cost of legitimising their power too much to bear and could no longer afford to sustain epic prestige projects. With the political system at breaking point, city-states finally began to collapse in the west, clustered around the Usumacinta River. The resource-rich area of Dos Pilas, filled with competing rulers and centres, was abandoned altogether when Ruler Four was defeated in 761

“WITH THE POLITICAL SYSTEM AT BREAKING POINT, CITY-STATES COLLAPSED”

Although cities such as Tikal could store enough water for up to 62,000 people, war, overexploitation, social strife and successive droughts pushed the region past its breaking point

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Having overexploited their land, amid climate change Maya kings soon found themselves unable to fulfil their side of the social bargain

by the neighbouring King of Tamarindito. Small bands of marauders formed in the provinces, launching violent raids and wreaking havoc on the overstretched city-states. The spiral of chaos continued to feed into itself, snapping the political spines of the region's kings, with nothing to offer their fleeing people.

In the ravaged Palenque, inscriptions ceased entirely in 799, indicating widespread abandonment of the centre. Before long, powers began to topple like dominoes, spreading ever eastwards. Palenque's demise was followed by Copán in 822, while Caracol was burned down in 859 and Tikal abandoned in 869. Toniná, the secondary power that had caused Palenque so much trouble, was deserted in 909. By this point construction had ceased in the region, evidenced by the last monument inscribed with the Maya Long Count date in southern Quintana Roo, Mexico. Eventually, the combined might of overpopulation, drought, overexploitation of the land, class conflict, war, disease and loss of trade led to a mass collapse of socio-political systems across the southern Yucatán.

Though it was a process centuries in the making, this mass exodus saw the majority of the population flee elsewhere. The early Postclassic period was marked by a redistribution of power, with many secondary and river-based centres managing to subsist through the chaos. Although the fortunes of many secondary leaders were tied to those of their more powerful allies and trade partners, others were able to maintain the status quo. With the decline of Palenque and Tikal, the smaller power of Yaxchilan declared independence. Rather than water, these rulers tended to exact tribute based on alternative sources of strength, such as non-exotic trade routes. The smaller settlements of Seibel and Xunantunich even enjoyed (short-lived) periods of prosperity.

Other minor centres that were rich in alluvium, such as Barton Ramie and Saturday Creek, on the Belize River, remained occupied until 1500. They managed to maintain water systems and even tap into the northern sea trade. To the north and the east coast other communities sapped up wayward Maya farmers, artisans and other migrants, with the city-state of Chichén Itzá enjoying a period of growth. However, by this point the trappings of traditional Classic Maya rule had crumbled, and the population of the southern lowlands of the Yucatán would never recover – even after the landscape did.

With farmers struggling to yield enough produce, the elites were left without the labour to build stelae and other epic works

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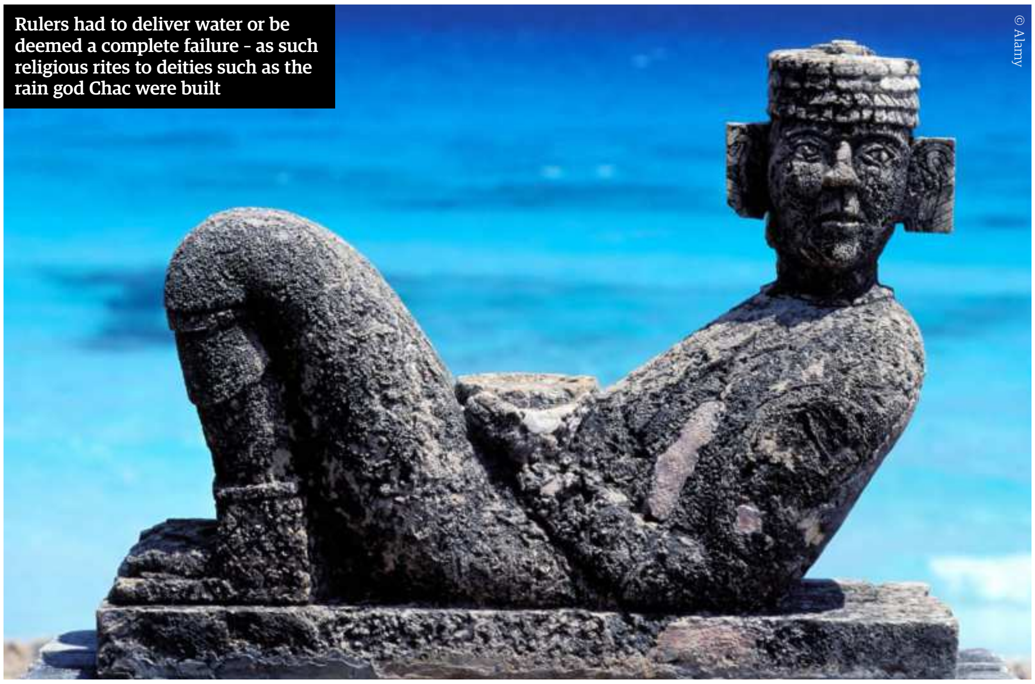

Rulers had to deliver water or be deemed a complete failure – as such religious rites to deities such as the rain god Chac were built

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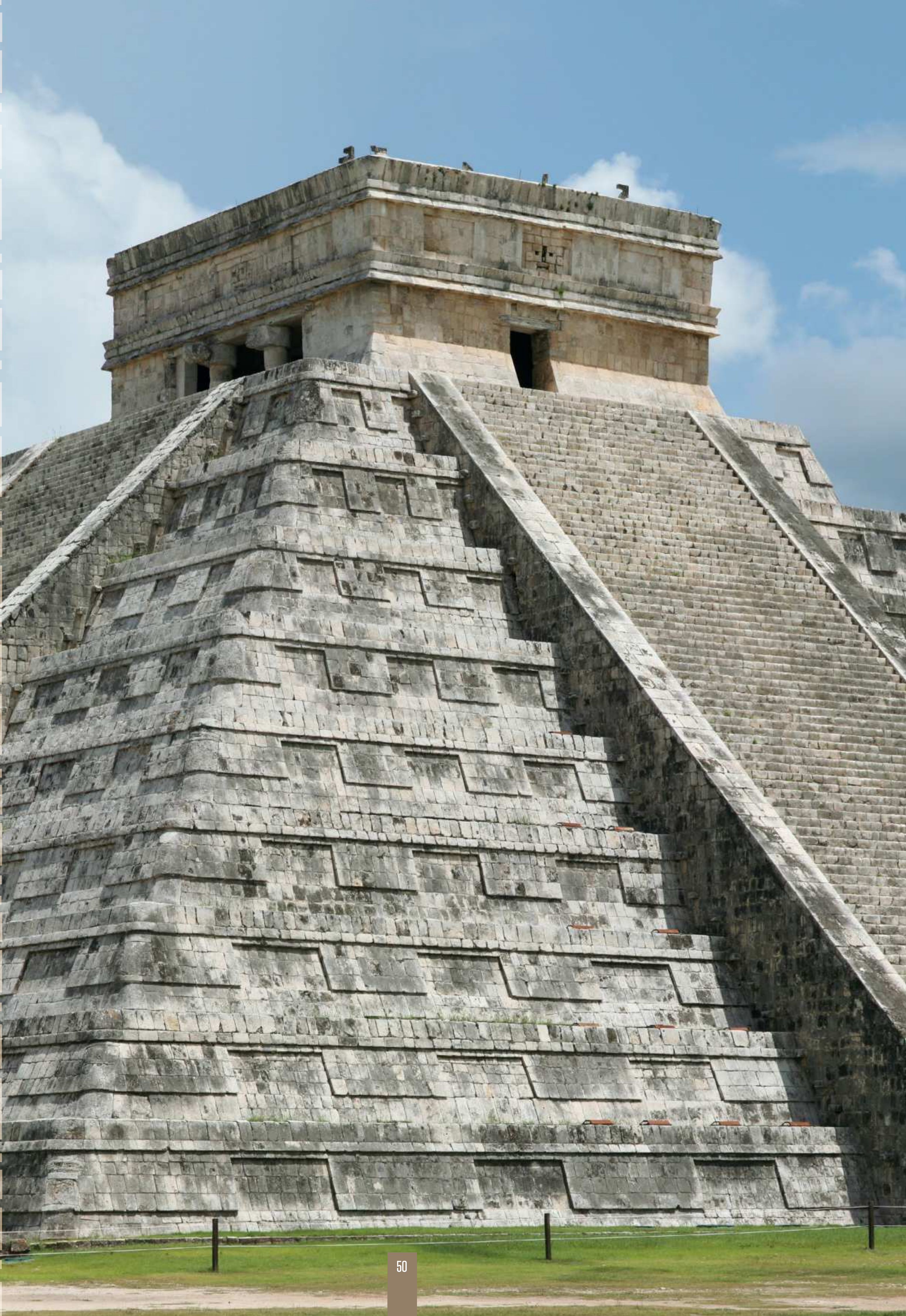


THE RISE AND RUIN OF CHICHÉN ITZÁ

This ancient Maya city stands today as one of the Seven Wonders of the Modern World

WRITTEN BY GRACE FREEMAN

One of the largest historical Maya cities to have ever existed, the earliest origins of Chichén Itzá trace all the way back to somewhere between 750 and 900 CE. Situated in Yucatán, in the northeastern peninsula of Mexico, it is approximately 740 acres in size and is filled with a plethora of ancient, pre-Columbian ruins and relics.

Although its beginnings are still somewhat uncertain, the literal translation of Chichén Itzá is 'At the mouth of the well of the Itza', with the additional interpretation of 'Itza' from Mayan as something akin to 'enchantment of the water'. Considering this, as well as the four visible sinkholes – known as cenotes – that the city holds, it is possible that much of its initial location appeal was due to the constant source of natural water that it was able to provide. Furthermore, worship of the rain deity Chaac was practised regularly by the Maya people; jewels, artefacts, and occasionally even human beings were sacrificed to the ancient god as part of the prayer for precipitation, with the hopes of encouraging fertile land and fruitful crops.

Of the four cenotes in Chichén Itzá, the Cenote Sagrado – or the Sacred Cenote – is the largest at over 60 metres in diameter and almost 30 metres in depth, and is located in the north of the peninsula settlement. Relics of the Maya people, including gold, pottery, fabric, and precious stones, have been discovered at the bottom of the cenote, along with some human remains, which were likely discarded into the sinkhole as a sacrifice to appease the gods.

Archaeologically, most of the original architecture still remains – much of it is preserved or restored – with a dense metropolitan hub spanning an area of just over three kilometres. Its biggest and most famous structure is the Temple of Kukulcan, also known as El Castillo – 'the castle' – which is located within an area of the city known as the Great North Platform. The pyramided temple stands at over 30 metres tall, with nine shrinking terraces and a summiting sanctuary, and each of the four sides has a slanting staircase to the top – the northeastern's base is carved with stone serpents – with a circumferential total of 365 steps to represent each day of the calendar year.

The Cenote Sagrado, or Sacred Well, at Chichén Itzá

> **“THE SUNLIGHT HITS THE PYRAMID AT AN ANGLE THAT CREATES THE ILLUSION OF A SERPENT SLIDING ITS WAY DOWN THE NORTH FACE”**

A 1930s excavation uncovered a smaller temple beneath the main framework of El Castillo, aligning with the pre-Columbian architectural culture of building larger structures over smaller ones across time, and it is also widely considered that there is a hidden cenote buried far beneath the pyramid.

El Castillo was dedicated by the Maya people to Kukulcan (‘feathered serpent’), a snake deity to whom they worshipped and who was a strong symbol of their religious community. During the spring and autumn equinoxes, the sunlight hits the pyramid at an angle that creates the illusion of a serpent sliding its way down the north face. Many academics believe this to be a homage to the snake god, and sacrificial relics have since been discovered in the older temple beneath the outer structure.

Other significant monuments in the Great North Platform include the Great Ball Court, the Temple of the Jaguars and the Temple of Warriors, all of which are significant in understanding more about the ancient Maya civilisation. The Great Ball Court is the largest and most-intact court of all 13 preserved in Chichén Itzá and a key spot in the metropolis as a site of ritualistic ballgames, whereby a large rubber ball was kept constantly in play between teams. The ceremonial significance of this often varied across communities, but it is widely believed that the ball itself was seen as representative of the Sun in pre-Columbian culture, with the scoring rings on the court signifying sunrise and sunset; the transition between day and night.

The Maya people, in particular, firmly believed in this liminality and interpreted it even further – with the sacred ballgame and its court a thin veil between life and death; between this world and the underworld (Xibalba). This alludes to the myth of the Hero Twins, as depicted in the sacred Maya text known as the *Popol Vuh*. In the tale, two brothers are playing the ballgame close by to Xibalba and are lured below by its lords as sacrifice. Before his death, one of the brothers conceives with a goddess, who births the Hero Twins. The duo is subsequently summoned by the gods of the netherworld to play the same ballgame. They eventually succeed, escaping Xibalba, and they remained revered in Maya myth as successors of death. The Great Ball Court at Chichén Itzá also continues to pay tribute to Kukulcan in its design, with surrounding panel walls depicting twining, wriggling serpents in various carved scenes. The Temples of the Jaguar, both situated on the east side of the ball court, are also engraved with serpentine symbols.

To the east of the Temple of Kukulcan is the Temple of Warriors, a layered, pyramid structure with a central stairway. It is flanked on its front and its side by over 200 stone columns - Maya warriors guarding and protecting the sacred space. A large sculpture reclines at the top; known as a chac-mool, it is a particular type of statue showing a horizontal figure leaning on its elbows, its head turned at an angle, and with an object balanced on its stomach. Chac-mools were considered to be messengers of the gods and the bowl or plate resting on its front a sacred offering. Along with the Temple of Warriors' chac-mool, and akin to the rest of Chichén Itzá's architecture, the top platform also holds two large, snake-engraved columns, which are further tributes to the serpent deity.

The Osario Group, a smaller complex than the Great North Platform, is located to the south of the site and also holds some significant ruins, along with Xtoloc Cenote - the settlement's second-largest water hole, named after the Mayan word for 'iguana'. This particular cenote was the main supplier of water to the city and is surrounded by stone storage tanks. Overlooking it is the Temple of Xtoloc, the ruins of which are carved with scenes of nature. It is probable that the sanctuary was used during religious ceremonies, likely linked to the cenote itself and worship of the rain god, Chaac.

The Osario Group's titular structure, El Osario, is similar to the Temple of Kukulcan in its framework, although it was built on a much smaller scale. It too houses a shrine at its top, but it instead leads downwards into a shallow natural cave - where seven tombs have also been discovered - and, as such, is also referred to as the Ossuary, because it is assumed to have once been a burial chamber. As with the surrounding buildings, carved serpents adorn the stairway, another visual prayer to the sacred Kukulcan.

The Ossuary also holds two underground passageways, both of which appear to have been sealed centuries ago. Now it is believed that if they were traversable, they would eventually lead to other local communes, such as the nearby Yaxuná, but they were possibly initially built as tunnels to the Maya underworld.

If its geographical relevance is still up for debate, the leadership and hierarchy of Chichén Itzá is even more so, and it is believed by some historians that the city operated governmentally in a different way to the rest of the Maya civilisation,

A statue of Chaac, the rain god, or an offerer on a Feathered Serpent on the Temple of the Warriors in Chichén Itzá

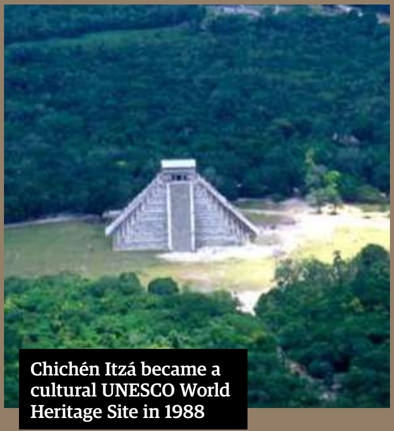
THE EIGHT WONDERS OF THE MODERN WORLD

FOR OVER A DECADE, CHICHÉN ITZÁ HAS BEEN REGARDED AS ONE OF THE FINEST RECENT MONUMENTS

At the start of the millennium, a private campaign was launched to select a contemporary Wonders of the World list from a choice of modern architecture. The poll was not regarded as official or absolute and the United Nations Educational, Scientific and Cultural Organisation (UNESCO), which awards world-heritage status to notable sites, was deliberately uninvolved. Even so, it garnered much public interest and went on to receive millions of votes.

The winners were announced in 2007, of which Chichén Itzá was one. The Great Pyramid of Giza, the only survivor of the Seven Wonders of the Ancient World, was granted honorary status, and the remaining six were as follows: the Great Wall of China, the Jordanian city of Petra, the Colosseum in Rome, Peru's Incan city of Macchu Picchu, the Taj Mahal, and Christ the Redeemer in Rio de Janeiro.

Despite its significant age, Chichén Itzá is not quite the oldest of the modern seven; this honour goes to the Great Wall of China, construction of which dates as far back as the 7th century BCE, followed not-so-closely behind by Petra and the Colosseum. The most recent monument on the renowned list is Christ the Redeemer, which was completed in 1931.



Chichén Itzá became a cultural UNESCO World Heritage Site in 1988

CHICHÉN ITZÁ ON FILM

THE ANCIENT GOLDEN CITY HAS ITS PLACE ON THE MODERN SILVER SCREEN

With over 2 million people visiting Chichén Itzá annually and its indisputable cultural significance, it is little wonder that the Maya ruins also have their part to play in film – both literally and metaphorically. As well as featuring in numerous documentary programmes throughout the years, it was also featured in the 1984 film *Against All Odds*, starring Jeff Bridges and Rachel Ward; this marked the first time that the Mexican government had granted permission for the historical city to be used and filmed for a theatrical film release. The actors shot further scenes in surrounding locations, including numerous other coastal Maya sites and the jungle landscape of Yucatán.

Although as yet not physically used elsewhere in film production, Chichén Itzá has provided much on-screen inspiration – perhaps most famously in the whip-cracking *Indiana Jones* series. In the most recent instalment of the franchise, the 2008 *Indiana Jones and the Kingdom of the Crystal Skull*, the archaeological hero journeys his way to Peru to delve deeper into the ancient culture and civilisation. He makes it there, of course – and his final destination looks remarkably like El Castillo.

with no singular ruling dynasty and a council composed of elite ancestries. More recently, the scholastic argument has been made for the traditional structure of political ruling under one familial lineage, similar to other communities of the time, though no definite conclusions have yet been drawn.

One undoubted element of the city's historicity, however, is its economic power – largely due to its aforementioned proximity to natural water springs, but also because of its port-side location on the peninsula. Here, it was able to participate in desirable trade with less readily available resources, such as rare stone and precious metal taken from the surrounding central countries.

As Chichén Itzá's prominence on the Maya map rose, other neighbouring pre-Columbian regions were faltering – the southern cities of Yaxuná and Coba in the east were weakening towards the end of 600 CE, which was known as the Early Classic period – and it is understood that there is some economical and societal correlation between this simultaneous rise and fall between the communities.

In various Maya sources, Chichén Itzá was conquered in the mid-13th century by the ruler of western Mayapán, who prophesied his own ascension to the metaphorical throne after surviving a jump into Cenote Sagrado. There is little subsequent archaeological evidence to corroborate such historical accounts and it is now more widely believed that the metropolis' eventual decline from distinction occurred around the 11th century – some significant time before the growth of Mayapán.

Many Maya civilisations' eventual demise was largely due to a changing natural environment and a bout of severe climate change; Maya records show that from around 820 CE, almost a century of austere droughts disrupted the region, some of which were to last for decades at a time. These falling cities, however, were largely located in southern territories – what we know as Guatemala and Belize, for example – and, if the same historical records are to be believed, the time period was one in which Chichén Itzá was not only managing to survive but actually flourishing.

However, further recent scholarly investigation into dated inscriptions and radiocarbon dating, which is a process used to determine the age of organic materials, show that the time-keeping records are not actually as accurate as once was thought, and their dwindling across the second half of the 9th century spans the northern region as much as the south. Historical researchers believe that this waning creativity is synonymous with the harsh climate conditions of the time, and it would seem as though Chichén Itzá was not entirely exempt from its impact.

The tzompantli, or skull rack, at Chichén Itzá

From surviving ruins and artefacts we know that the metropolis did survive into the following century – a period that notably received more rainfall than in previous years – but the 11th century brought yet another catastrophic drought, which the city was unable to ever fully recover from. Following the extreme arid spell and low production of crops, the Maya community and their largest cosmopolitan centres were unable to viably be sustained economically or societally; they slowly diminished and would never reach their full height or power again.

From around 1050, settlements were slowly abandoned en-masse and many began to make their way towards the Caribbean coast or to other larger bodies of moisture. Despite moving away, the people seemed to be hearkening back, still, to the Maya respect for and worship of water, its properties and its reigning deity, Chaac.

By 1100, Chichén Itzá had completed its downfall, and it was ultimately defeated by the Spanish in the mid-16th century. In 1527, conquistador Francisco de Montejo – a veteran of the infamous Cortés expedition that had led to the fall of the Aztec Empire – was granted permission by the king of Spain to travel to Yucatán; he consequently secured a small fort to the south of what now is known as Cancun and, in 1531, founded a base at Campeche.

In 1532, his son Montejo the Younger journeyed to Chichén Itzá and, encountering no resistance or hostility, began to divide the settlement among his men. By 1534, the Maya people began to fight back for their land and more and more Spanish troops were lost. Montejo retreated before then returning and recruiting Maya civilians from his father's settlements and creating an Indio-Spanish army; the peninsula city was eventually claimed by the Spanish Crown.

A page from the *Dresden Codex*, an 11th-century Maya book found at Chichén Itzá

A jade relief showing a representation of the Maya sun god

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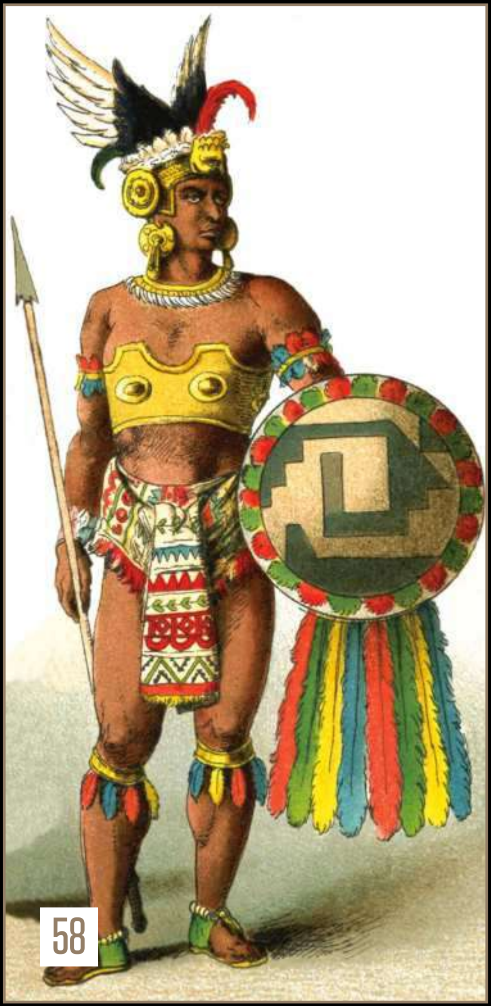
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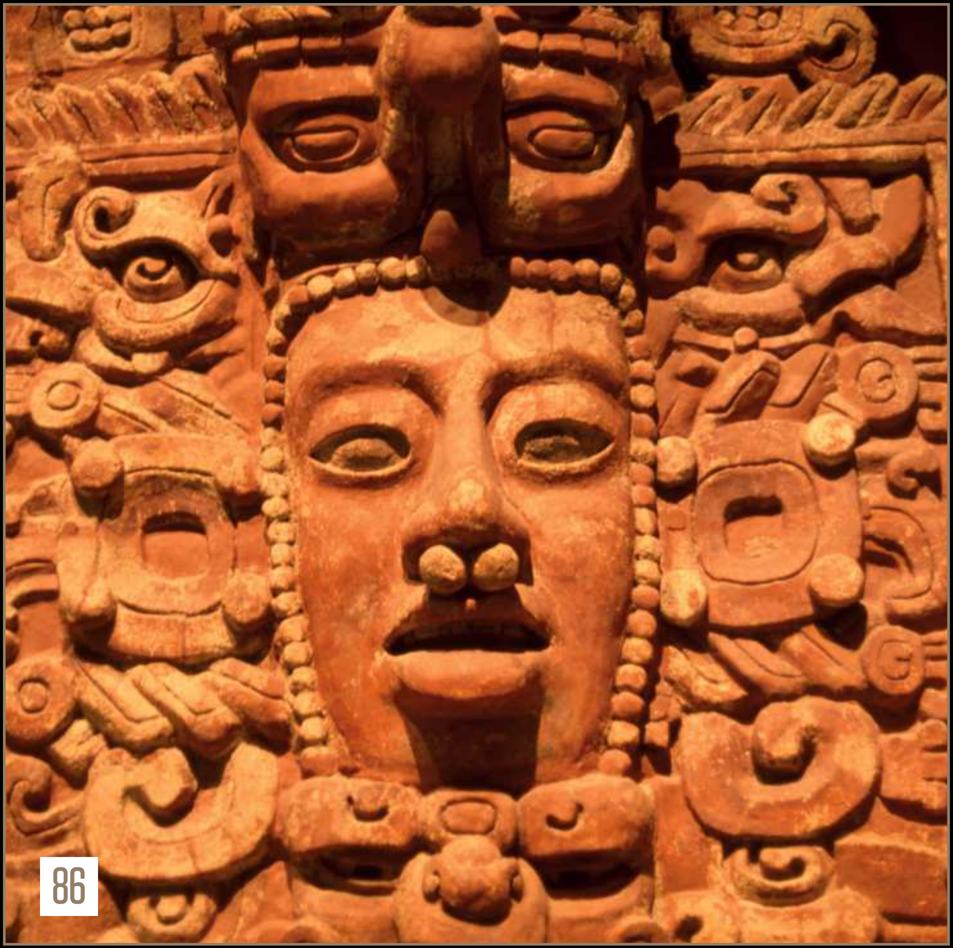
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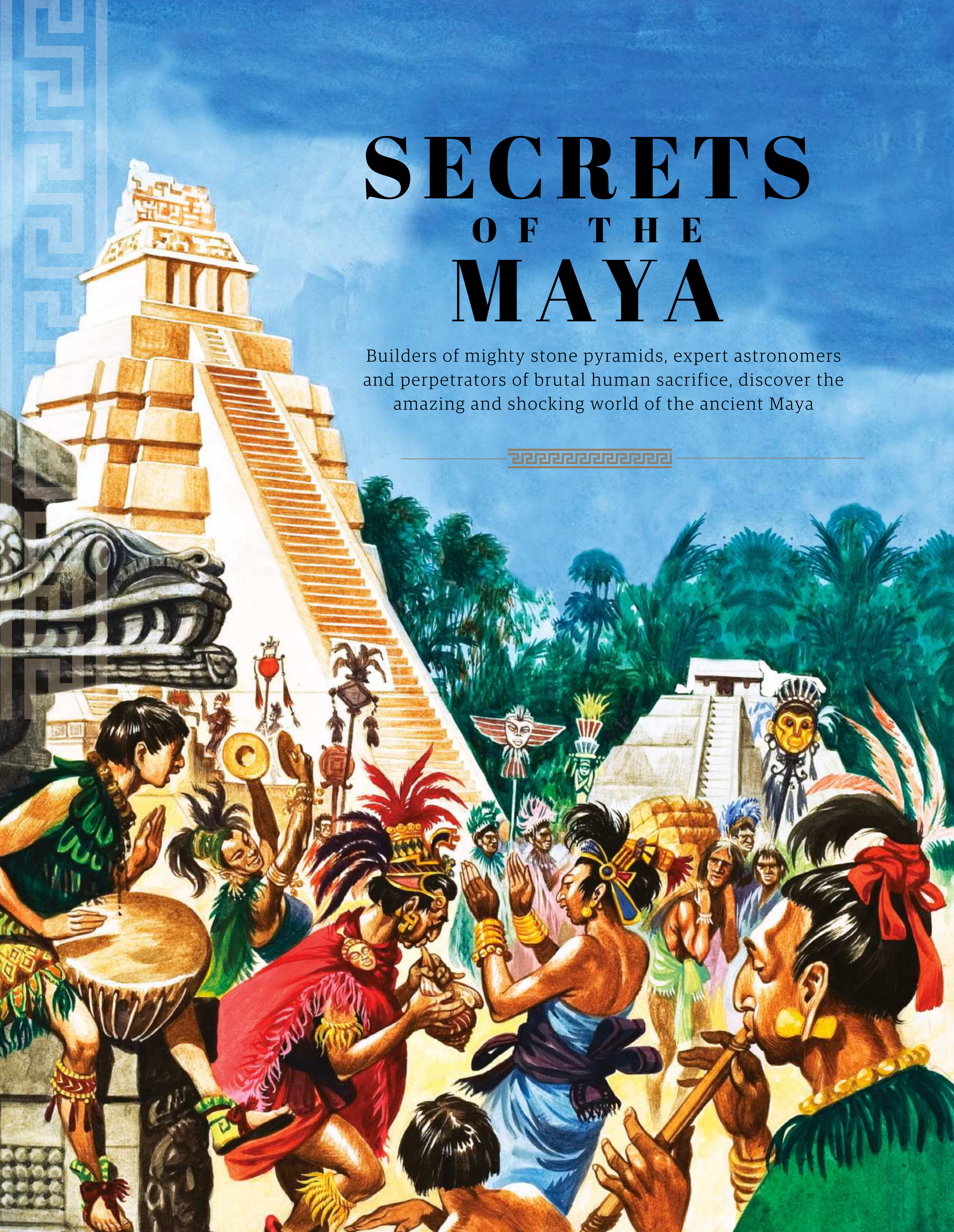
SECRETS OF THE MAYA

Builders of mighty stone pyramids, expert astronomers and perpetrators of brutal human sacrifice, discover the amazing and shocking world of the ancient Maya



Deep in the hot and humid tropical jungles of Mesoamerica, an ancient and mysterious race of people thrive. Dressed in bark loincloths and grasping long spears crafted from volcanic rock, they appear at first glance to be a savage, backward people, but their sensitive and intellectual study of the stars, medicine and language suggests otherwise. Spanning a period of thousands of years, their civilisation will create grand stone cities so mighty that they will outlive the rise and fall of nations. The mysticism surrounding them will grow so fervent that it will be capable of launching worldwide hysteria centuries later.

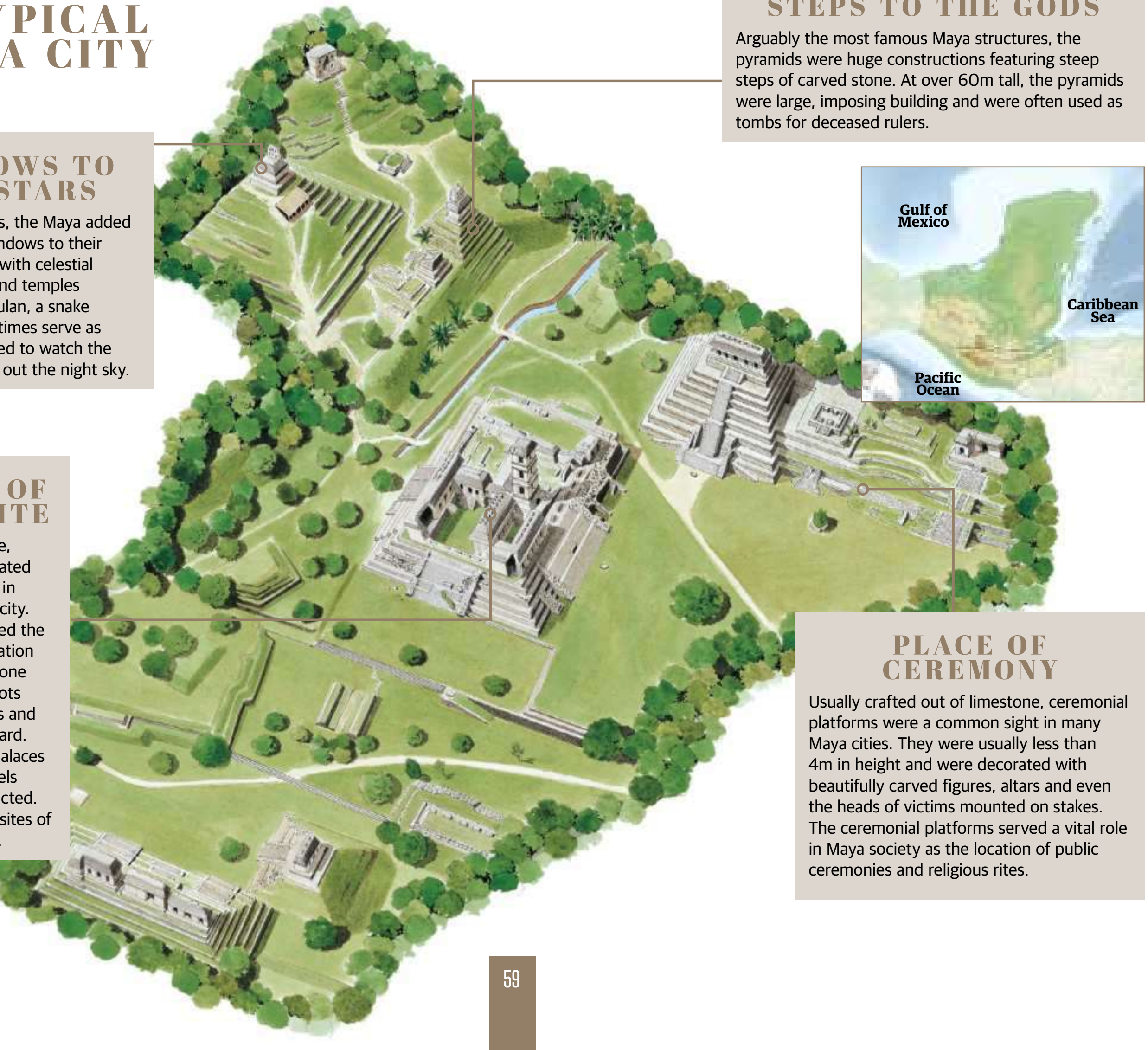
Creating a civilisation against all odds, the Maya prospered in the harsh temperate deserts of southern Mexico and northern Central America. When the Spanish led their brutal and bloody conquest they destroyed many Maya artefacts, so lots of their secrets were unfortunately burned to ashes. But they were unable to completely erase all trace of the Maya society, and their great stone cities are a testament of their long-lasting resilience. To this day people remain intrigued, curious and inspired by this ancient civilisation and the mysticism surrounding it.

Centuries ahead of their time, the Maya created the first written language of the pre-Columbian Americas, expertly predicted celestial events and developed a system of mathematics more advanced than the one used in Europe at the time. But they also engaged in brutal and bloody battles, spreading war to neighbouring territories, claiming prisoners and plunging knives through their chests atop their mighty step pyramids.

Within the ancient Maya civilisation lies a collision of worlds, a mix of sacrifices, ancient rituals of the past, the pursuit of knowledge and ingenious engineering of a more advanced age. Their herbal medical techniques are still being studied and practised today, while the breathtaking majesty of the city of Chichén Itzá has been proclaimed one of the greatest wonders of the world.

Perhaps we'll never know for sure who exactly these enigmatic people were, but due to recent discoveries of the messages they left behind, we are closer now than ever to unravelling the mysteries of the Maya.

LAYOUT OF A TYPICAL MAYA CITY



WINDOWS TO THE STARS

Keen astronomers, the Maya added doorways and windows to their buildings aligned with celestial events. Great round temples dedicated to Kukulan, a snake god, would sometimes serve as observatories, used to watch the equinox and map out the night sky.

HOMES OF THE ELITE

Palaces were large, elaborately decorated structures placed in the centre of the city. The palaces housed the elite of the population and were usually one storey high with lots of small chambers and an interior courtyard. However, larger palaces with different levels were also constructed. Palaces were the sites of numerous burials.

STEPS TO THE GODS

Arguably the most famous Maya structures, the pyramids were huge constructions featuring steep steps of carved stone. At over 60m tall, the pyramids were large, imposing building and were often used as tombs for deceased rulers.

PLACE OF CEREMONY

Usually crafted out of limestone, ceremonial platforms were a common sight in many Maya cities. They were usually less than 4m in height and were decorated with beautifully carved figures, altars and even the heads of victims mounted on stakes. The ceremonial platforms served a vital role in Maya society as the location of public ceremonies and religious rites.

STEP-BY-STEP GUIDE TO BLOOD SACRIFICE

From everyday animal sacrifice to the decapitation of kings

DECAPITATION

Decapitation was almost always used for the most highly prized sacrifices, such as enemy kings or the captive loser of the Maya ball game Pok-Ta-Pok. This is because decapitation was strongly linked to the Maya myths where the gods of death decapitated the maize god. Victims would sometimes be scalped, beaten or disembowelled prior to their decapitation. A number of mass graves of headless and dismembered high-ranking nobles have been discovered.

ARROW SACRIFICE

In this form of sacrifice the victim was tied to a stake while a ritual dance was performed. A white mark over the sacrifice's heart would serve as a target for archers, who would take it in turns to shoot the unfortunate victim – or honoured tribute, depending on your point of view – until their entire chest was covered with arrows. In arrow sacrifice it was important the victim died slowly, and the archers would dance repeatedly around the sacrifice before shooting.

HEART REMOVAL

The most common form of human sacrifice, this would usually take place on the summit of the pyramid. The victim was stripped and painted the colour of sacrifice – blue – and dressed in a peaked headdress. They would then be laid on a stone and a sacrificial knife would be used to cut out their still-beating heart, which was presented to the temple idol. The corpse would be thrown down the steps and skinned before the head priest would drape the skin around him as he performed a ritual dance.

SINKHOLES

The city of Chichén Itzá possessed two natural sinkholes, or cenotes. The largest of these, Cenote Sagrado, was used for human sacrifice. Victims were thrown into the sinkhole, known as the Well of Sacrifice, as an offering to the rain god. Long cords were tied around the victim's body and they were thrown into the gulf and, after drowning to death, the sacrifice was pulled back up and buried. These ceremonies were often viewed by large crowds of people who would pray throughout the gruesome proceedings.

HUMAN BLOODLETTING

This type of sacrifice involved the piercing of a soft body part with a sharp object, such as stingray spines. The blood was smeared on idols or collected on paper that was then burned, the rising smoke thought to create a gateway between worlds and a connection to the gods. Usually the tongue, ears or lips would be pierced, but blood from genitals was the most highly prized, the Maya believing it to possess tremendous fertilising power to encourage the growth of plants and crops.

ANIMAL SACRIFICE

Animal sacrifice was by far the most common sacrificial ritual partaken before any important task. The Maya did not possess 'food' animals like sheep, cows and pigs but instead focused on hunting wild game. As a result, white-tailed deer were the most commonly sacrificed animal, closely followed by dogs and birds. A host of more exotic animals, such as jaguars and alligators, were also offered as sacrifice.

Timeline of a great civilisation

1800 BCE

The birth of a civilisation
Maya settlements are established in the Soconusco region of the Pacific coast. The Maya establish permanent communities here and the first fired-clay figures and pottery pieces are soon produced.

250 BCE – 100 CE

The Preclassic era
In the northern Maya lowlands smaller Maya communities begin to develop, distinct from the large centres in the southern lowlands. The first Maya hieroglyphics emerge in written inscriptions on stone around this time.

This earthenware lidded vessel is an example of Maya art

250–800

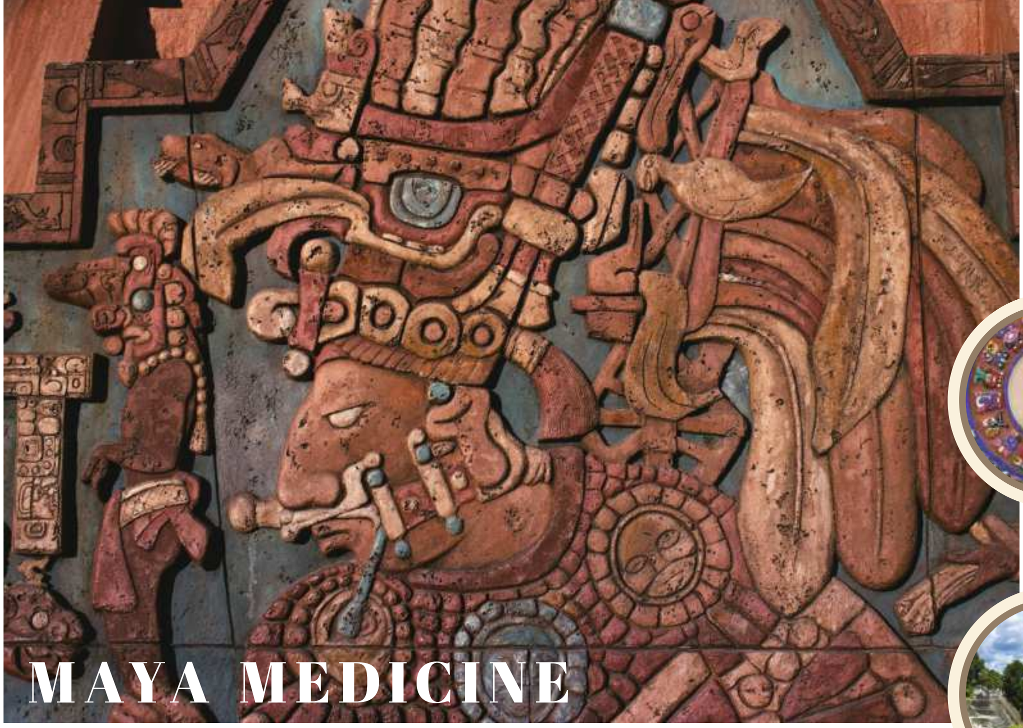
The mighty Maya
Large-scale urbanism and construction occurs and powerful city-states emerge. The population increases to millions and the political and economic network steadily expands throughout the wider Mesoamerican world.

800–900

Widespread collapse
Major cities in the southern lowlands fall into decline and are abandoned. The origins of this event, known as the Classic Maya collapse, remain a mystery, with various theories such as drought, warfare or an ecological disaster suggested as causes.

1000–1500

The north lives on
The northern cities thrive, building highways to increase trade. After the decline of the cities of Chichén and Uxmal, Mayapán rules over much of the territory until a revolt in 1450. Small pockets of southern states are slowly reconstructed.



MAYA MEDICINE

The surprisingly sophisticated practices of Maya medicine men

TOOTHACHE

Remedy: Maya were very skilled in dentistry, and fake teeth were made from jade and turquoise if the patient could afford it. If a filling was required, iron pyrite ('fools gold') was used. There was also a trend in dental decoration where the teeth were filed into points, ground into rectangles and drilled with holes. The holes would then be filled with jade or gleaming iron pyrite to produce a pattern on the teeth.

PAIN

Remedy: Pain was often treated by putting the patient into a trance-like state using mind-altering substances commonly utilised in rituals. Flowers, mushrooms, tobacco and plants used to make alcoholic substances were collected and usually smoked. If required, a ritual enema could be used for rapid absorption and immediate pain relief.

POISONOUS STINGS

Remedy: Sweat baths, or temazcal, were used to encourage the patient to sweat out and expel impurities from their body. They were also used for ailments such as rheumatism, fevers, weariness after battle or for women who had just given birth. The hot steam was thought to help purify and restore the body for a long, healthy life.

PRAY THAT YOU DIDN'T GET... SMALLPOX

When the Spanish began their conquest of the Maya, they brought with them diseases previously unseen by the skilled medicine men, such as influenza, measles and tuberculosis. But it was a plague of smallpox that devastated the civilisation, killing as many as 90 per cent of the native population in a century. Up against a rapidly spreading disease on a scale that was previously unfathomable, the natural herbal remedies of the Maya didn't stand a chance.

MAIN PRINCIPLES

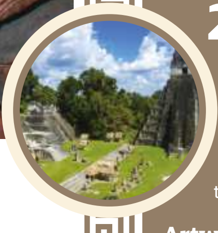
Maya medicine focused on the concept of life force and the idea that this force can be directed to where it is needed. It was a healer's job to balance this life force, which binds everything together. As this life energy also ran through plants, a lot of Maya healing was focused on the use of flora. The blood determined the health of the body, so the pulse was a key tool in working out the nature of the illness. Diseases were also classified as either 'hot' or 'cold', and hot foods such as onions and ginger would be used to treat cold illnesses and vice versa.

5 REASONS THE MAYA WERE AHEAD OF THEIR TIME

Astronomy

1 The Maya were highly skilled in astronomy and developed an incredibly accurate calendar. The Maya calendar featured a complicated arrangement of interlocking circles that was capable of keeping time to a degree even more accurate than the calendar we use today. They were also able to predict the positions of celestial objects precisely despite not having any specialised equipment to help them do so.

Architecture



2 More than 4,400 Maya sites have been documented with architecture spanning thousands of years. The gigantic La Danta pyramid covers 45 acres with a height of 70 metres, making it one of the largest pyramids in the world by volume. It is largely because of the long-lasting nature of these buildings that we know so much about the Maya.

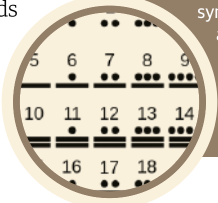
Artwork

3 Archaeologists have unearthed an abundance of detailed Maya artwork including massive stone sculptures, wood carvings, narrative paintings and delicate ceramics. Most remarkable of all are the objects created from thick, dense materials such as jade and obsidian as, unlike the Incas, the Maya did not have any metal tools. Their artwork often features Maya blue, a bright azure pigment that remains as vibrant today as the day it was painted. The techniques behind producing this substance have not yet been discovered.

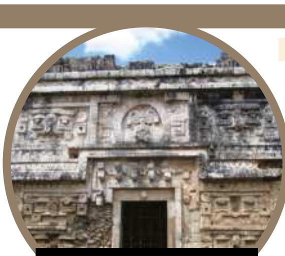
Writing

4 Maya script was a writing system comprising of hieroglyphs, and they were the only civilisation in Mesoamerica with a complete writing system. The earliest Maya inscriptions date back to the 3rd century BCE, cementing them as the inventors of writing in their region. The complex writing system uses a combination of 800 glyphs to represent words and is the only Mesoamerican writing system that has been substantially deciphered.

Maths



5 This great civilisation created one of the most advanced mathematical and numeric systems in the world at the time. This sophisticated number system allowed them to write very large numbers by utilising just three symbols: a dot, bar and shell shape. The Maya also developed the concept of zero as early as 36 BCE and produced a symbol for it while Europeans were still using the Roman numeral system.



Much remains of the city of Chichén Itzá, one of the seven wonders of the world

1502–1529

The Spanish conquest begins

Christopher Columbus arrives in Guanaja and discovers a Maya settlement. The Europeans loot what they can carry and capture some Maya as slaves. News of Columbus' discovery travels and more Spanish explorers journey to Maya lands, bringing Old World diseases such as smallpox, influenza and measles.

1528–1530

The Maya fight back

Led by Francisco de Montejo, the Spanish begin their conquest of the Maya territories in the northern region. However, the Maya are not so easily toppled and fight back with surprising strength, leading to the conquest dragging on over several bloody years.

1540–1547

Continuing conquest

The Spanish conquest continues and in 1541 the first Spanish town council is established in the Yucatán Peninsula. Many Maya lords submit to the might of the Spanish crown, but eastern provinces resist Spanish rule. The rebellious eastern Maya are finally defeated in battle and hundreds are killed.

1618–1697

The final collapse

The last stage of the Spanish conquest takes place in the Péten Basin. In 1618, Spanish missionaries arrive at the Itza capital and they are followed in 1622 by a military expedition. The Maya massacre the invaders, but by 1697 the Maya kingdoms are incorporated into the Spanish Empire.

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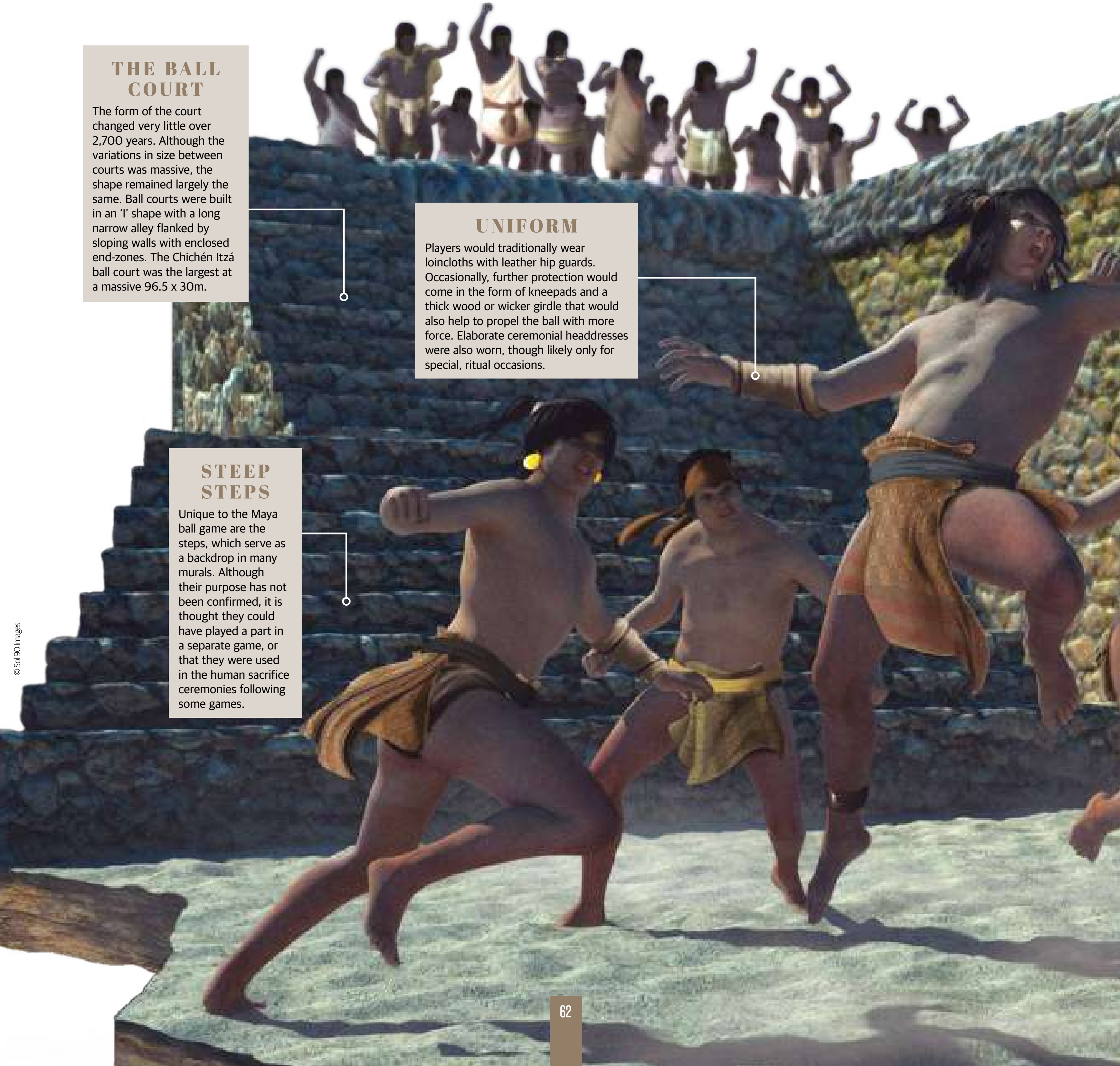
POK-TA-POK

An ancient game of life and death

A common feature of many Maya towns were the great masonry structures used to host grand feasts, conduct rituals and display wrestling matches. However, their primary purpose and most popular attraction was the deadly Maya ball game of Pok-Ta-Pok. As the ancient game was played, the stone slabs transformed into a battleground, a sacred place, a portal between this world and the one beyond. Two opposing teams would face each other with the aim of keeping the ball in play and, for an instant win, directing the ball through a high-mounted hoop. The players could only use their hips, shoulders, head and knees as the use of feet or hands was forbidden. Players would dash around the court with lighting-quick speed in an attempt to lead their team to victory, as a single wrong move could mean the difference between life and death.



THE BALL COURT

The form of the court changed very little over 2,700 years. Although the variations in size between courts was massive, the shape remained largely the same. Ball courts were built in an 'I' shape with a long narrow alley flanked by sloping walls with enclosed end-zones. The Chichén Itzá ball court was the largest at a massive 96.5 x 30m.

UNIFORM

Players would traditionally wear loincloths with leather hip guards. Occasionally, further protection would come in the form of kneepads and a thick wood or wicker girdle that would also help to propel the ball with more force. Elaborate ceremonial headdresses were also worn, though likely only for special, ritual occasions.

STEEP STEPS

Unique to the Maya ball game are the steps, which serve as a backdrop in many murals. Although their purpose has not been confirmed, it is thought they could have played a part in a separate game, or that they were used in the human sacrifice ceremonies following some games.

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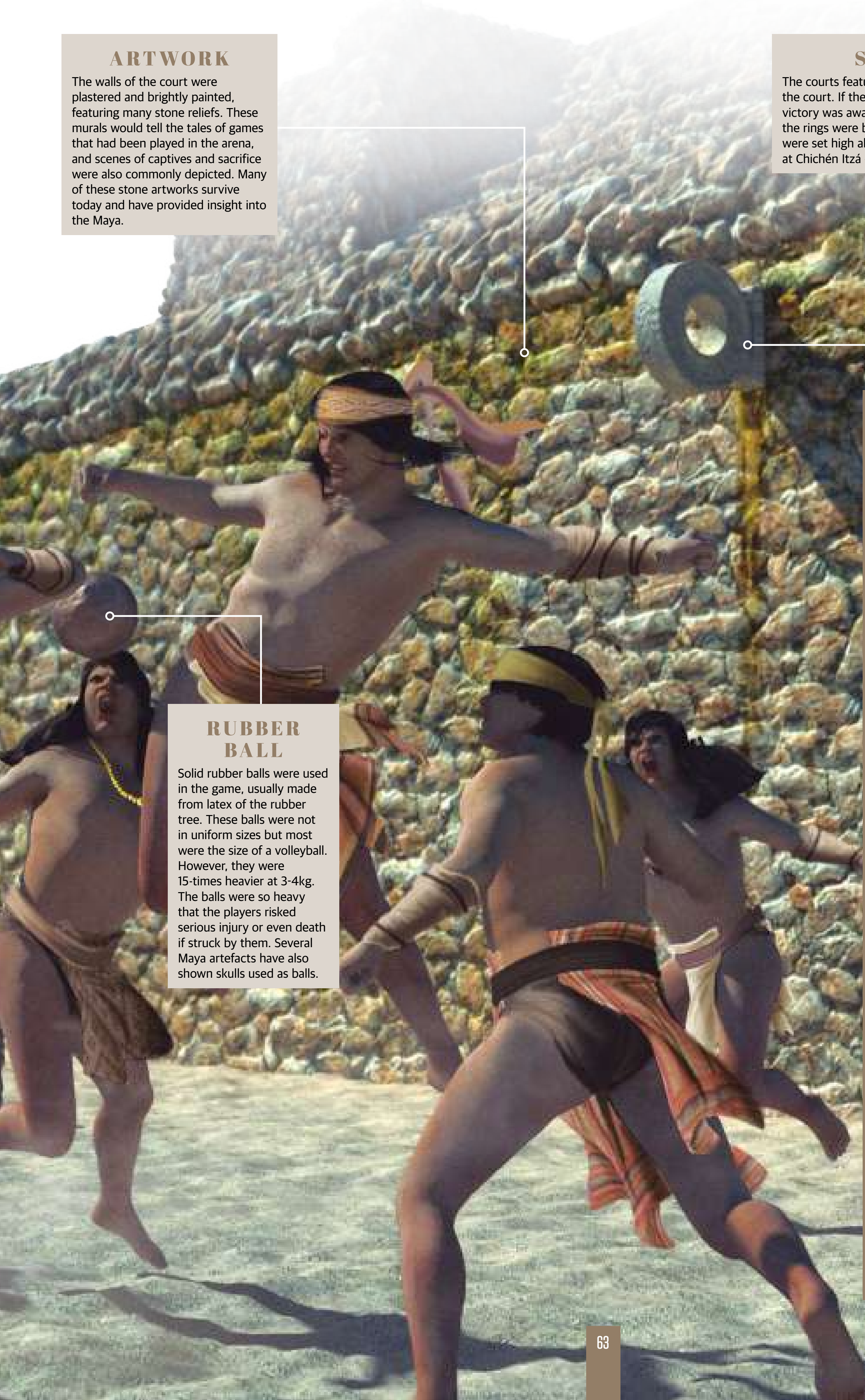

ARTWORK

The walls of the court were plastered and brightly painted, featuring many stone reliefs. These murals would tell the tales of games that had been played in the arena, and scenes of captives and sacrifice were also commonly depicted. Many of these stone artworks survive today and have provided insight into the Maya.

STONE RINGS

The courts featured vertical stone rings on each side of the court. If the ball passed through the ring, a decisive victory was awarded to the scoring team. However, as the rings were barely bigger than the ball in play and were set high above the playing field – for example, 6m at Chichén Itzá – this was a rare event.

RUBBER BALL

Solid rubber balls were used in the game, usually made from latex of the rubber tree. These balls were not in uniform sizes but most were the size of a volleyball. However, they were 15-times heavier at 3-4kg. The balls were so heavy that the players risked serious injury or even death if struck by them. Several Maya artefacts have also shown skulls used as balls.

A MATTER OF LIFE AND DEATH

Pok-Ta-Pok's origins were rooted in symbolism and myth that defined much of the Maya society. The myth surrounding the game tells the tale of the hero twins who defeated the lords of death in the ball game and tricked them into decapitating themselves. The game told the story of the journey between life and death and it was revered so highly that it was used to settle disputes within society. At times the game was used as a means to defuse conflicts to avoid warfare, with kings playing against kings for domination, waging their battles on the ball court.

Sacrifice was an important and revered aspect of the ball game and is depicted on the glyphs of many ball courts. Sometimes captives would be bound and forced to play a rigged ball game they could not win, after which the loser would be beheaded. However, practised players were also sacrificed and there is evidence to suggest that it was sometimes the winning team or captain who were chosen. The idea of a quick death and instant passage to paradise was regarded as an honour. However, sacrifice did not take place in every game, as star teams existed. It is likely that there were two versions of the game, one played as a sport with betting involved and another as a sacred re-enactment of the mythical story complete with human sacrifice.

A ball-court mural depicting a scene of human sacrifice

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3 Maya myths examined

THEY PROPHESIED THE END OF THE WORLD

👍 Experts analysed the Mesoamerican long count calendar, used by the Maya, by using ancient inscriptions. The calendar foretold that the end of the cycle would fall on 21 December 2012. In the Maya calendar this represented the end of the 'fourth world', ushering forth a large worldwide change, something that would change the face of the Earth forever.

👎 Although it is correct that the end of the cycle was a major event for the Maya, this would be cause for celebration rather than concern. This also didn't mark the end of the calendar; there would simply be another cycle after that one. After all, there was a cycle before the one in question. Additional calendars were also found that prove the Maya believed the world would continue for at least another 7,000 years.

Conclusion: FALSE
There is no evidence of this doomsday theory anywhere in Maya texts, and it demonstrates a misunderstanding of Maya history and culture.

THEY DIDN'T DEVELOP IN MEXICO

👍 It is highly unlikely that an ancient civilisation could have prospered in the seasonal desert in which the Maya are believed to. Other ancient civilisations in Egypt, China and Mesopotamia all developed along rivers, with access to stable sources of drinking water. It is therefore more reasonable to assume that the Maya developed elsewhere and then reached the tropical lowlands toward the end of their history.

👎 It is true that the Maya civilisation is thought to have prospered in unusual territory - a seasonal desert without a stable source of water - but to deny their ability to do this is to ignore their remarkable accomplishments. The Maya created an ingenious system of storing water based on rainfall and also engineered the first water-pressure system. Additionally, there is evidence from archaeological excavations that the Maya developed many skilful methods of dealing with their harsh environment.

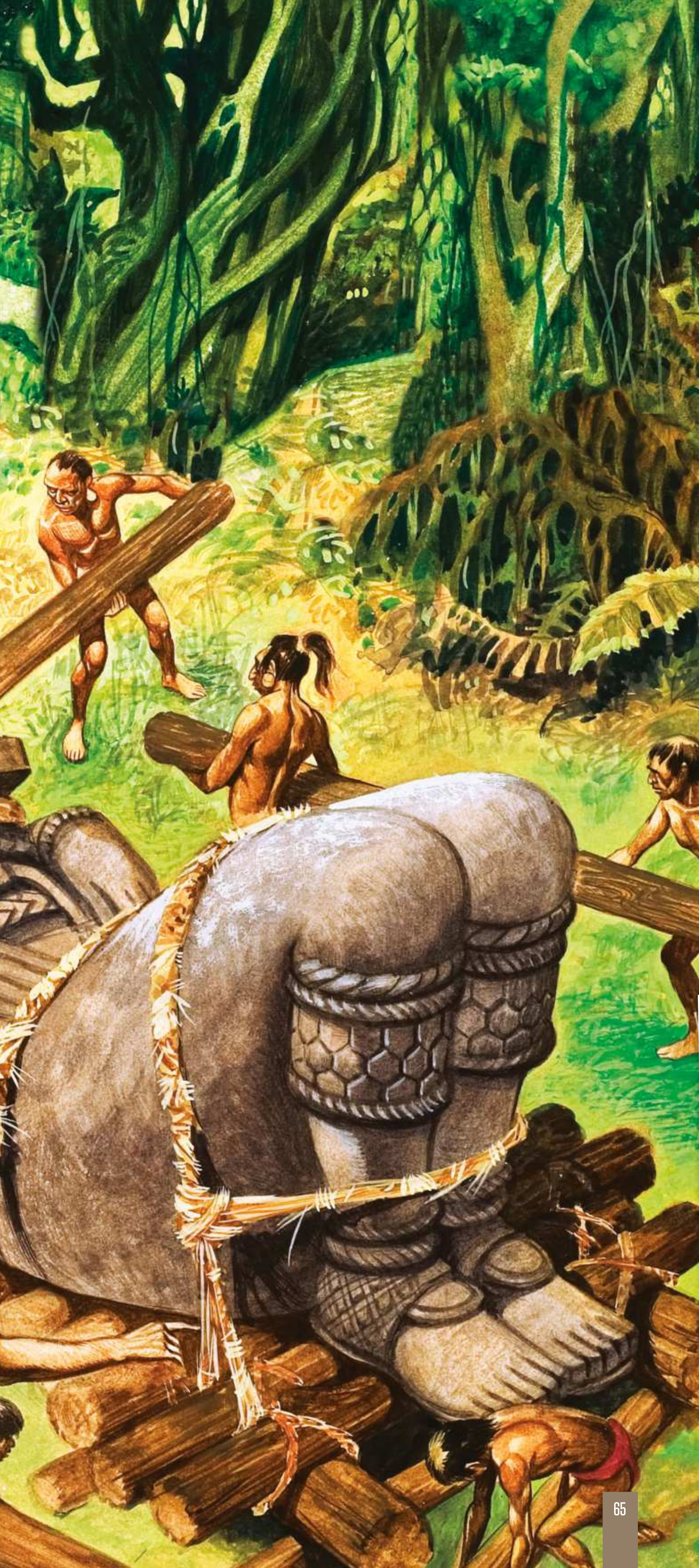
Conclusion: FALSE
There's no evidence to back up this myth - countless archaeological finds place the Maya firmly in the Mexican lowlands for thousands of years.

THEY WERE A PEACEFUL PEOPLE

👍 The Maya were an incredibly developed society for their time. They were primarily concerned with intellectual pursuits such as astronomy, mathematics and writing. They believed in a life force that unites all things and had great respect and faith in the power of nature, with healing practices that demonstrated this. The Maya also lived in dispersed, self-sufficient city-states with a strong focus on agriculture.

👎 Recent discoveries and newly deciphered writings show a very different side to the pacifists the Maya were once believed to be, indicating they often fought and warred between themselves. The individual rulers of the city-states were eager to expand their territory and they would do this through war and bloodshed. Fortified defences and artistic depictions of war as well as the discovery of weapons all contribute to the theory that the Maya were regularly involved in violent warfare.

Conclusion: FALSE
The Maya were not any different to the great majority of ancient civilisations, and war was the driving force for much of their cultural change.

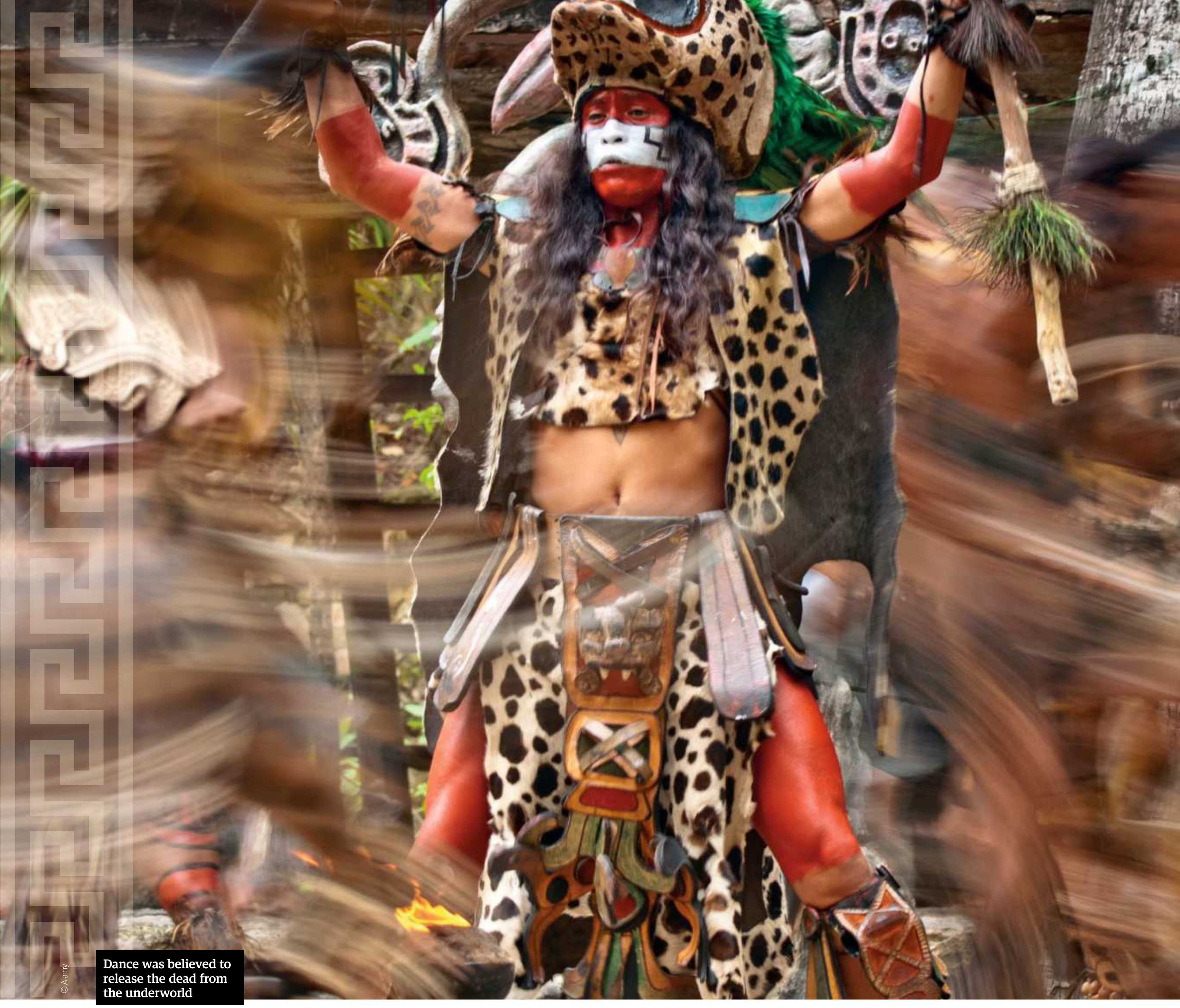


THE FINAL MYSTERY

WHAT HAPPENED TO THE MAYA?

In 800 CE the Maya civilisation was at its peak, its city-states spread from southern Mexico to northern Honduras, and millions of citizens worshipped and prospered in their towns. However, just 100 years later all that remained of these magnificent cities were ruins, and the people had fled en masse. This has led some researchers to believe the cities were plagued by a sudden catastrophic event such as an earthquake or volcanic eruption, but due to the length of time of the decline this is rather doubtful.

The theory of modern invasion or war also seems unlikely to account for the mass collapse that occurred. More likely is the sudden introduction of a devastating infectious illness that tore through the population. But the most popular theory is that the civilisation was hit by a severe drought. Highly reliant on rainfall and hunting, an environmental disaster such as this would have proved catastrophic to the Maya. However, there has been no definite proof for any theory, so the Maya collapse remains one of history's biggest unsolved mysteries to this day.


Dance was believed to release the dead from the underworld

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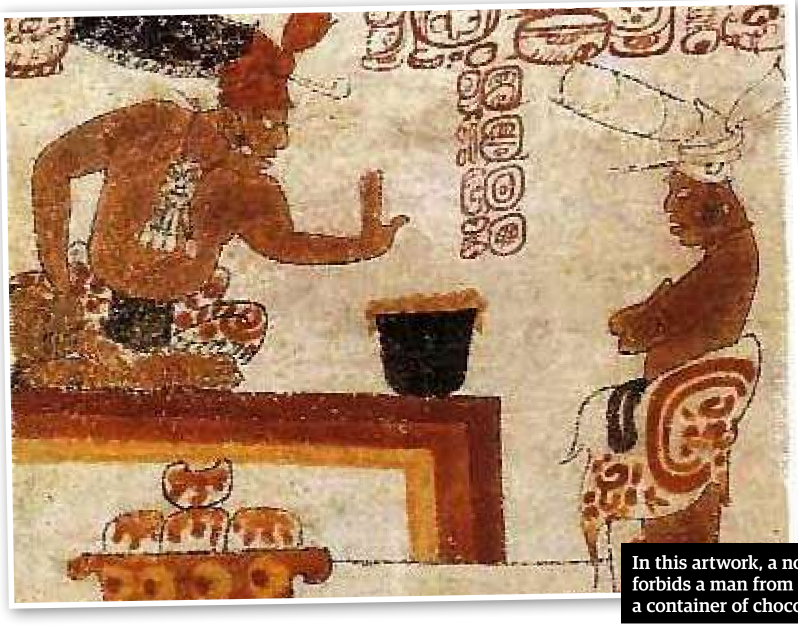
DAILY LIFE FOR THE MAYA

Life in the Maya world revolved around the key values of strong family bonds, hard work and community

WRITTEN BY FRANCES WHITE

Daily life for the Maya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In this artwork, a noble forbids a man from touching a container of chocolate

© Wikipedia Commons

Chocolate became such a crucial aspect of Maya society that it was woven into the creation myth

Society in the Maya civilisation formed a pyramid. At the base sat commoners, forming a crucial foundation for all above them – artisans, traders, nobles and leaders. Someone's place on this pyramid not only determined their place in society but every aspect of their lives – from jobs and clothing to food and housing. While the nobles and leaders lived in large palaces made of stone, commoners resided in mud huts on the edge of the city in single rooms designed to house the entire family, including aunts, uncles and grandparents. Commoners would even be buried beneath the floor of the same house they had lived in for their entire lives.

JOBS

For Maya commoners, the most common occupation was farming. Maya society relied on their farmers not only for sustenance but also for trading. Farming was incredibly hard work, as the Maya did not use metal tools or beasts of burden to help them. All the work was done by simple stone tools or by hand. In order to combat this, Maya farmers used ingenious techniques to help feed their large populations. For example, the three main crops of maize, beans and squash were grown together, as each provided support for the others. They would also use slash-and-burn agriculture, where they would burn the entire area and plant in the rich ash. Not all commoners were farmers; they also worked as porters, limestone quarriers and servants to nobles. The nobles would usually fulfil the more revered roles of priests, government officials, scribes or military leaders. The Maya believed that noble heritage was passed down in blood and that this gave the nobles a greater link to the gods than the common man. This made social escalation nigh-on impossible for commoners.

Another key role in Maya society was the artisan class. They were employed to create beautiful works of art for the nobles to enjoy. Although they were still regarded as commoners, they managed to avoid the hard physical labour in the fields and instead spent their days making jewellery, pottery and headdresses. This was often a family trade, and every member of the family would be involved in creating the goods that maintained their livelihood.

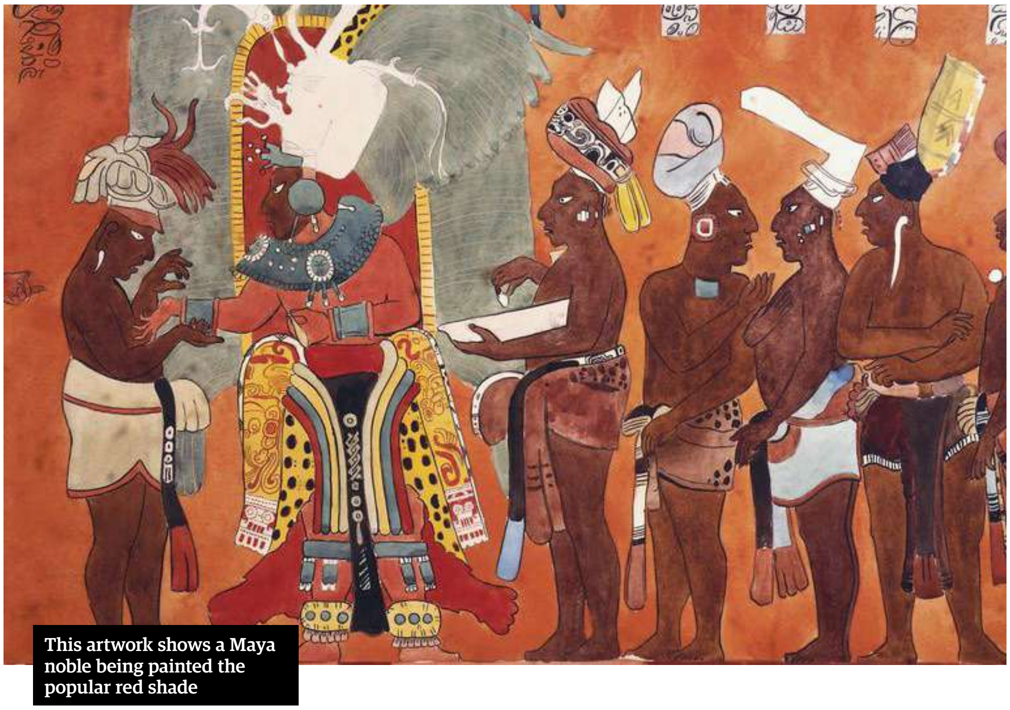
CLOTHING

Clothing was very much dictated by social class. Commoners were prohibited from wearing the same clothes as nobles. Commoners' clothes would be suited for hard physical labour, comprising of simple garments – loincloths for the men and blouses and long skirts for women. Both were granted the protection of a cape-like blanket called a mantra if it was cold.

The wealthy wore colourful clothes, feathers and elaborate jewellery crafted by master artisans. Embroidery, animal skins, furs and precious stones were all used to make a noble's clothing stand out. Hats showed high social standing – literally; the higher the hat the better. Some hats were known to be even taller than the person wearing them.

Jewellery was a major aspect of Maya fashion, and those who could afford it would decorate their entire bodies with jewels. The rich wore earrings, nose rings, necklaces and pins made of gold, silver and gemstones, while the poor would wear the same but made out of bones, clay or even sticks. The most popular stone was jade, thought to represent life and growth. Tattoos were also popular, as the Maya believed that any body modification demonstrated their high social status to the gods.

Crossed eyes were seen as attractive, and parents would try and force this upon their children by hanging a stone from a string between the baby's eyes attached to a headband. They also desired long noses with a pronounced beak, and many would use an artificial nose



© Wikipedia Commons

This artwork shows a Maya noble being painted the popular red shade

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Tamal colado was a typical Maya dish made from corn dough mixed with turkey and vegetables and served in a plantain leaf

bridge to achieve this hooked shape. Another unusual beauty standard was pointed teeth, and commoners and nobles alike would file their teeth to sharp points. If they could afford it they'd have precious stones drilled into them too.

Body paint was another technique used to determine a Maya's role in society. Black was used for unmarried men, blue for priests, bands of red and black for warriors, and red was a popular shade for all.

WOMEN

Despite being subordinate to men, women played a much more central role in Maya society than previously believed. There were female rulers, usually as regents for their young sons or as widows to kings. Women also frequently served the role of priestesses at specific sacred sites, usually places of pilgrimage such as caves and cenotes. These sites would draw not only commoners but nobles, who would give praise to the goddess Ix Chel, goddess of fertility, midwifery and medicine. Priestesses also fulfilled the role of fortune-tellers.

The most common role for Maya women was to take care of the household, which was no small thing. The importance of childbirth was such that women were well respected for their role in it. Women also played an incredibly crucial part in maintaining the economy by way of the textile industry. Women were spinners, weavers and dyers, creating elaborate works of art in textiles to fund the bountiful trade networks. It was not unheard of for women to work as farmers, and in some areas as herders, raising deer herds to feed the population.

CHILDREN

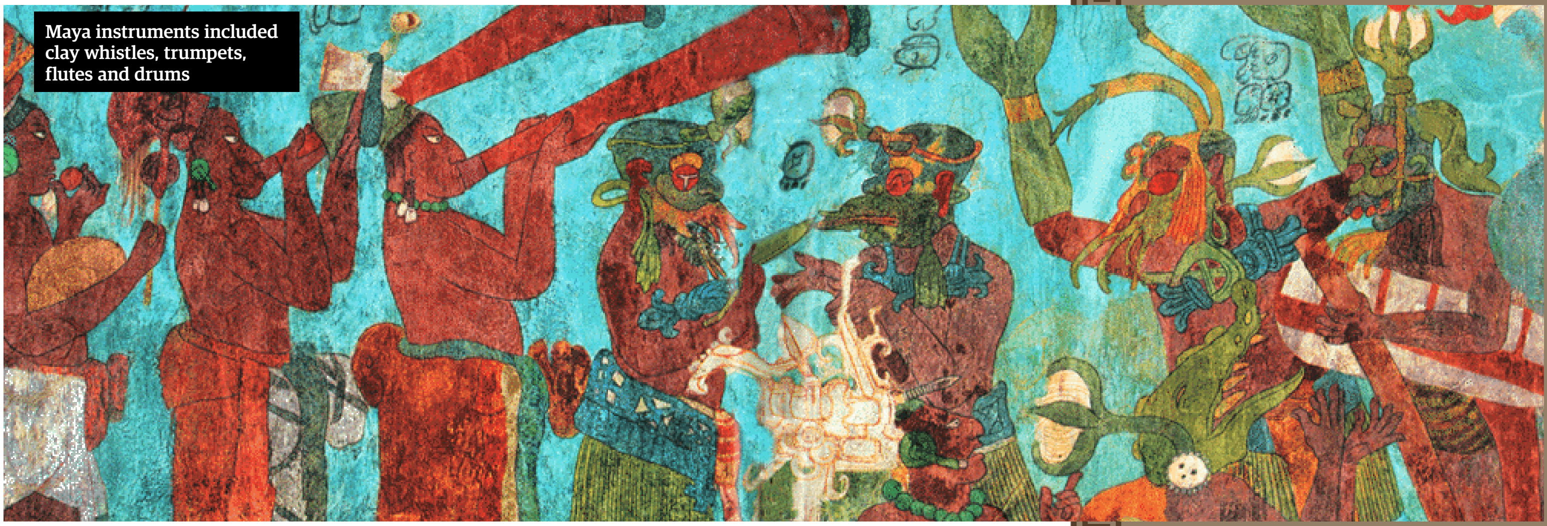
The birth of a child was a hugely important moment in Maya society, not only as a sign of good fortune but also of wealth. All children were given a childhood name by a priest, but the nickname bestowed by their family was what they commonly went by. Children had a strict path to follow in life. The key value which they were expected to uphold was to respect and help their elders. A strong work ethic that could be used to better the community was also an important aspect. From the age of five or six children were given the responsibility of contributing to their families. This crucial age was marked for boys by a white bead being woven into their hair, while girls received a red shell to wear at their waist. These symbols of purity were not to be removed until they engaged in a ceremony that would mark the end of their childhood, usually around the age of 14 for a boy and 12 for a girl.

Girls and boys would both follow their respective parents to learn their trade. Girls would be encouraged to perform household duties such as cooking, spinning yarn, weaving and cleaning. Meanwhile, boys would be taught the art of farming as soon as they reached the age of five.

Although girls would live with their parents until they were married, boys were expected to be independent once they reached adolescence. Young unmarried men would live together in houses until they were matched with a wife. These marriages were almost always arranged and did not occur until men were 18 and the girls at least 15. The newly married man's duty did not end there; after marriage he was expected to live with his wife's parents and assist his new father-in-law on the farm for up to six years. This follows the key Maya tradition of respecting and looking after the elders in the community and helped to build strong familial bonds.

FOOD

Besides maize, other popular staples included beans, squash, chilies, tomatoes, sweet potatoes, black beans and papaya. A typical Maya breakfast would comprise of a porridge of maize and chilies called saka. Dumplings made from maize dough filled with vegetables and meat would serve as a midday snack. The main evening meal would usually involve tortillas eaten with a stew of vegetables and, if they were lucky enough to afford it, meat. Popular meat included fish, deer, duck and turkey. The Maya were also known to eat dogs, guinea pigs and armadillo.



Maya instruments included clay whistles, trumpets, flutes and drums

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"THE MOST POPULAR FOOD THE MAYA INTRODUCED TO THE WORLD WAS CHOCOLATE, HARVESTED FROM CACAO TREES"

The most popular food the Maya introduced to the world was chocolate, harvested from cacao trees. The cacao seeds were seen as so valuable that they were traded like money, and chocolate was regarded as a gift from the gods themselves. Chocolate was a treat reserved for only those who could afford it - nobles. They would drink it in a frothy liquid form on a daily basis. Chocolate was deemed so godly that it was sometimes used as a replacement for sacrificial blood in religious ceremonies.

ENTERTAINMENT

Although most of a Maya's time revolved around hard work to sustain the community, they also made time for entertainment. This entertainment usually revolved around religious ceremonies, and they enjoyed dancing, music and playing games. One of the most infamous games was Pok-Ta-Pok, where the players had to get a rubber ball to pass through a hoop, with the losing team often being sacrificed. The game held deep religious meaning, symbolising victory over death for the victors, but it was also sometimes just played for fun.

The Maya had many dances for different purposes, including the shadow of the trees, the monkey dance and the dance of the stag. Usually these dances were offered as a form of worship to the gods. Musical performances involved everyone in society, from old to young and rich to poor, and it was not unheard of for these festivals to attract over 15,000 spectators.

This stucco head of a Maya king not only shows the incredible work of artisans but also the ideal qualities of beauty

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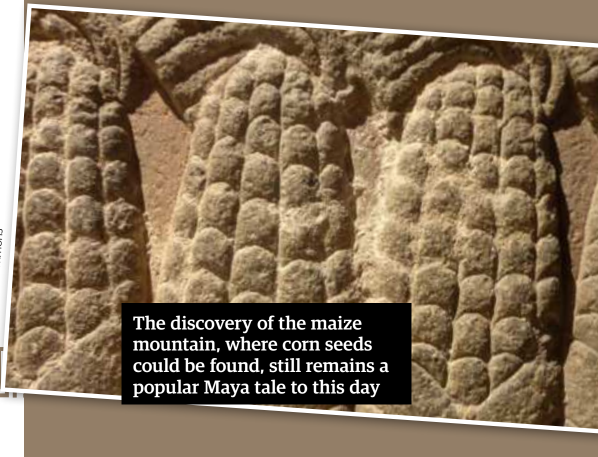
AN A-MAZIE-ING POWER

ONE THING UNITED ALL OF MAYA SOCIETY – MAIZE

Maize, or corn, was so central to Maya culture that it intersected with almost every aspect of their lives. Maize grew well in the hot climate, could be easily stored and was capable of feeding the entire population single-handedly. Maize formed a base for many popular meals including tortillas, porridge and even drinks. The crop was also used in medicines to combat ailments such as tumours, diabetes and hypertension. The importance of maize extended to religion, as the Maya believed that human beings were originally created from maize. One of the central gods of the Maya religion was Hun Hunahpu, the maize god.

This fascination with maize extended even to Maya ideas of beauty. As an ear of corn narrows near the top, an elongated head was seen as a very attractive feature. Maya would use a process called trepanning to force newborns' heads into this shape. Boards were attached to the head to press against the forehead to force it to slope up and backwards. This was not limited to the nobility, and 90 per cent of Maya skulls have been found to be elongated in this way, demonstrating just how important maize was to the entire population.



The discovery of the maize mountain, where corn seeds could be found, still remains a popular Maya tale to this day

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COOK LIKE THE MAYA

See how the ancient Maya made delicious, spicy foods - from farm to fork

WRITTEN BY ALICE BARNES-BROWN

Much of Latin American cuisine today is a fusion of Spanish and indigenous foods

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This mural depicts Maya men farming an all-important cornfield

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With their hands still covered in sticky corn dough, a Maya family sits down for their evening meal. The matriarch watches as her children greedily get at the grub, while her husband patiently watches after a long day at the farm. Their spread is fit for a king - besides the stews and stodgy breads common to most Maya homes, a hot cocoa drink bubbles away on a fire. The smell of chocolate, chilli, fruits and spices wafts through the village, drawing in visitors hoping for a bite.

The villagers weren't the only ones to appreciate it either. Maya food was a feast so divine even the haughty Spanish conquistadors were impressed by the range of meaty dishes, spiced fruits, fresh vegetables and boozy drinks on offer. But to discover how the Maya cooked up such a storm, you have to start with the soil.

The staple of Maya cuisine was maize, which grew all across the Maya civilisation. High in nutrients and carbohydrates while cheap and quick to produce, corn held a unique place in Maya society. The crop had its own god - Hun Huapu - whose corn-themed appearance is a common fixture in Maya hieroglyphs and art. The *Popul Vuh* scripture even said that humans were originally made from corn, so it's no surprise that it comprised 60 per cent of the Maya diet. From hearty atole to fluffy tortillas, corn was always at the table.

Cornfields abounded throughout the Maya countryside, but in a place where mountains, rivers and rainforests took the place of arable land, farming it was difficult. Thankfully, the Maya's craze for maize meant they found ways to plant their favourite crop, even in tricky conditions.

A standout feature of Maya agriculture was raised fields, built above sodden ground to create fertile land. Mud from the bottom of a swamp or river was dug up and placed atop a reed mat, which in turn was suspended a couple of metres above the water level. This nutrient-rich soil could yield two or three crops every year, which the Maya took full advantage of by planting climbing beans around maize stalks and squash plants at the base (which had the added bonus of preventing soil erosion). This system was so clever, it's still used today in parts of Central America.

Another farming technique widely used across the Americas is terraced fields. To feed such a mighty civilisation, the Maya needed space, and lots of it. When the flat land had run out, they rushed to the hills, carving out fields from the mountainsides. These, too, were constructions of great genius - stone walls prevented water runoff and soil erosion, while the Sun hitting the crops improved their flavour and growth.

When the Maya got really desperate for space to grow their grub, they chopped down parts of the rainforest and burned what was left. As the fire seared through ancient trees, ash fell like snowflakes onto the soil, enriching it with nutrients. This was good to grow maize for a couple of years, but it would quickly wear out.

Of course, corn wasn't the only thing the Maya were experts at growing. Each house had a little patch of land, in which they grew fruits (papaya, guava, avocado, tomato and peppers were some of the best loved) and vegetables (mostly squashes such as pumpkin, plus red and black beans) for their own consumption. This meant each family had a very healthy diet, rich in protein and vitamins as well as carbs and fat.

Most Maya food was plant-based, but make no mistake, they loved their meat, whenever they could spare the resources and time to get it. Deer, monkeys and armadillo were frequently hunted, while birds such as quail and ducks also featured on the menu. In their yards, the Maya domesticated succulent turkeys, and they were even known to fatten up dogs for eating.

Fish were also a tasty addition to Maya stews - they were caught from the rivers and the seas

On this piece of pottery a citizen offers a tamale to the gods

Wikipedia Loves Art participant "artifacts"

Without the Maya, we wouldn't have many of the ingredients we consider basic today

©iStock

Tamales consist of a dough that is steamed inside a corn husk. Fillings can include vegetables, cheese, meat, chillies and even fruit

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using traps, lines and nets, just as we do today. But if the fisherman was feeling lazy, he'd call upon his trusty trained cormorant to help. These agile birds would snatch hapless fish in their beaks, but their necks were tied so the cormorant couldn't eat the catch for itself. The fisherman could then take the day's catch home for his dinner, where his wife would roast the fish over an open fire, seasoning it with salt and spices.

Indeed, the Maya were masters of mining salt and used it generously to preserve food for later. Dried, salted fish hanging on a line was a common site at urban markets. Sodium was also important to Maya sauces and marinades - when mixed with sour orange and lime, it creates a sweet and tangy taste on the tongue, perfect for adding extra flavour to meats. And the Maya were definitely suckers for flavour.

Corn has always been a staple food in the diet of the Maya people

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But any cook worth their salt knows it's not just the seasoning that makes for a great dish. The Maya knew this too and cooked foods in certain ways to optimise their flavour. Otherwise bland tortillas were cooked over a hot plate called a comal, adding a slightly singed flavour to the masa (corn meal). Meats and fish, meanwhile, were best cooked in the 'pib' - a hole in the ground filled with white-hot charcoal, covered over with leaves and dirt. This ensured that flesh was tender and fell off the bone. Steaming was also an effective way to cook, particularly tamales - filled corn dough wrapped in plantain leaf or a corn husk and steamed until soft.

Tamales were often the centrepiece to any Maya main meal, but that's not all you'd find at their table. Savoury, squash-based stews sit next to tortillas, strategically placed so the corn flatbread can mop up the juices when the stew is long gone. There would also have been a wide variety of moles (sauces) laid out, from avocado-based guacamole to a spicy tomato salsa.

It's the selection of beverages that truly astounds, however. Naturally, there's a cup of hot cocoa involved (provided you were rich, because the cocoa bean was so valuable it was used as currency). Maya chocolate was spiced with chilli and sweetened with honey and vanilla to make it a sumptuous treat. Fruits could be squeezed to make fresh juices too. For something a bit stronger, the Maya drank balche - a type of mead made from fermented tree bark and honeyed water. Though it was mainly consumed during religious ceremonies, it was still very popular - perhaps too popular, because the Spanish later banned it. In fact, the Spanish left their own mark on Maya cuisine. They imported milk, cheese, beef, chicken, pork, rice, olives, raisins and so much more into Maya lands, and the locals took to them with varying degrees of enthusiasm. Perhaps the most marked Spanish influence on Maya food was the addition of milk and sugar to hot cocoa, transforming it into the warming, sweet bedtime drink the world knows and loves today.

Today's much-loved Mexican food is the result of Spanish interference with traditional Maya dishes. Whether it's the sour cream you generously lather on your rice-filled burrito, or the cheeses you heap on your beany enchiladas, Mexican cuisine is a glorious mix of Maya and Spanish influences.

Some things don't change though. Maya people living in modern-day Mexico and Guatemala remain faithful to their ancient recipes, cooking stews and tortillas using traditional methods. Even the recipes for famous Maya dishes like guacamole, salsa and corn tortilla have largely stayed the same. As an added bonus, the spices the Maya used to amp up their culinary creations are now popular the world over - chilli has since become a vital ingredient to African, Indian and even European dishes. Simple vanilla, meanwhile, is by far the world's favourite flavour.

And whatever would we do without chocolate, or tomatoes, or peppers, or pumpkins? A world without Maya cookery is a world without both its key basics and some of its finest foods.

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TORTILLAS

WRAP YOUR FAJITAS THE OLD-FASHIONED WAY WITH THESE CORN WRAPS

INGREDIENTS:

- 150g masa harina (cornmeal)
- 100ml lukewarm water
- 1 tbsp sunflower oil
- Pinch of salt

STEPS:

1. Mix all the ingredients together in a bowl. Knead to get rid of any lumps.
2. Break up the dough into golf ball-sized pieces and, using a rolling pin, roll each piece into a flat round. It should be about the thickness of a coin.
3. In a lightly oiled frying pan, fry each tortilla for about 30 seconds on each side.
4. Place on a plate and wrap with tea towels to keep the tortillas warm.

©iStock

ATOLE

STAY WARM WITH THE ULTIMATE MAYA COMFORT DRINK

INGREDIENTS:

- 720ml water
- 250ml full-fat milk
- 65g masa harina (cornmeal)
- 50g dark brown sugar
- 2 tsp ground cinnamon
- ½ tsp vanilla extract

STEPS:

1. Toast the masa harina in a pan over a low heat. When it starts to brown add in the water, whisking constantly.
2. When it begins to bubble add the milk, sugar, cinnamon and vanilla. Bring to a simmer.
3. Whisk constantly for about five minutes until thick. Taste a little, and add more sugar if you like.
4. Whisk bubbles into the top and pour into mugs.

TAMALE

THESE CORN (ISH) PASTIES ARE GREAT TO EAT ON THE GO

INGREDIENTS:

FOR THE BEAN FILLING:

- 400g black beans, dried
- ½ tsp chili powder
- 4 fresh chillies, sliced and diced
- 1 tomatillo, chopped
- 1 tbsp salt

FOR THE TAMALE:

- 500g masa harina (cornmeal)
- 500ml warm water
- 1 tbsp salt
- 15 banana leaves or corn husks

STEPS:

1. In a pot, simmer the black beans, garlic, chili powder, chillies, and pour in some water so that it rests approximately two inches over the top of the beans. Bring to a boil, then simmer for 30 minutes.
2. Add the salt and continue to cook until the beans are tender when poked with a fork.
3. Drain the mixture of any excess liquid and add the chopped tomatillo.
4. To make the tamale dough, mix the masa harina with the salt. Add the warm water slowly, stirring continually.
5. Beat until there's a fair amount of air in the dough.
6. Lay out a banana leaf or corn husk flat and spread two tablespoons of tamale dough on it, leaving an inch border on each side. Add one tablespoon of the bean filling.
7. Fold the sides of the husk/leaf in towards the centre and place the parcel in a covered steamer.
8. Do this for all the tamales and cook in the steamer for 45 minutes. Serve immediately!

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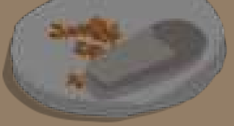
MAKE A MAYA CHOCOLATE DRINK

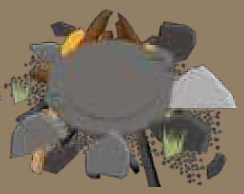
Enjoy a bitter-sweet cocoa treat that's worthy of the gods

WHAT YOU'LL NEED

MANO AND METATE



COMAL GRIDDLE PAN



COCOA BEANS

CHILLI PEPPERS

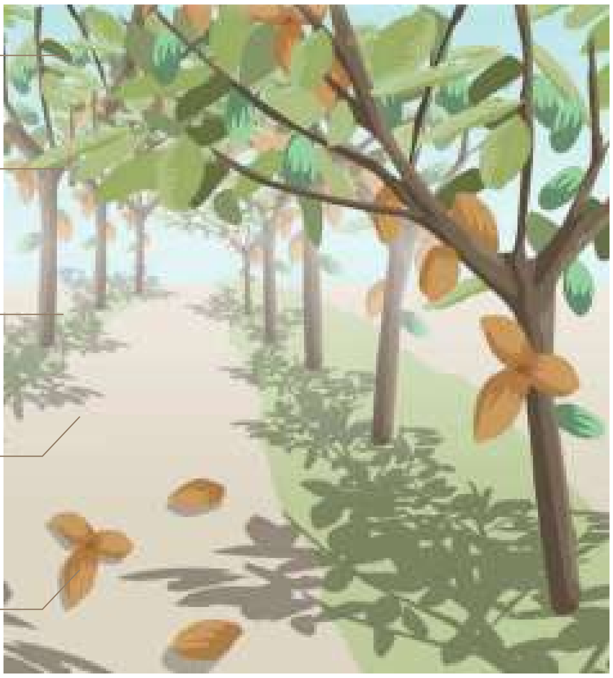
CUP

Before it was made into bar form and became the inspiration for drumming gorilla adverts, chocolate was popular in Central America. Consumed by the Maya, *Theobroma cacao*, or cocoa tree seeds were used to make a unique type of drink. The simple mix quickly became the drink of choice for whoever could afford it. Drunk out of elaborate vessels, the chocolate was used in major Maya events such as religious festivals and marriage ceremonies. The recipe was passed on to the Aztecs and then the Spanish conquistadors as the phenomenon went global, eventually becoming the sugary product we know and love today.

THE CACAO TREE

THE WAITING GAME

Each tree only begins to bear fruit between the ages of three and five, but it always produces flowers.



Pod location

When it's time, cocoa pods will sprout from the trunk and branches of the tree, ready for harvesting.

Inner goodness

Each pod contains between 30 and 50 cocoa beans as its seed. This is enough for about seven chocolate bars.

Insect competition

During collection, watch out for midges on the pods. They are small enough to fit on the head of a pin.

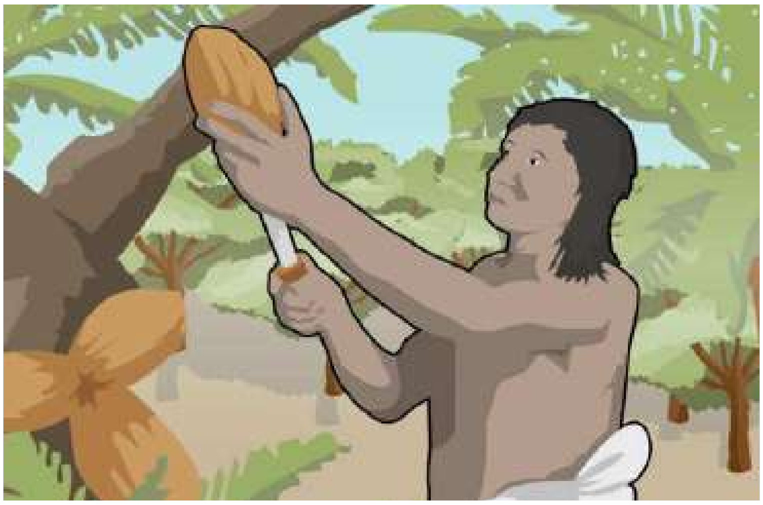
Grow your own

To save trekking into the forest again and again, keep some seeds for yourself and grow your own cocoa tree.

Don't cook them all!

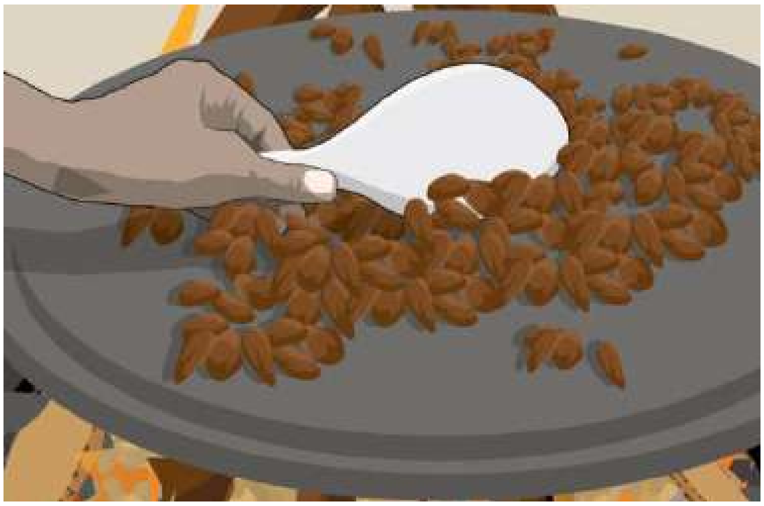
Cocoa beans could also be used as currency. Four could buy a pumpkin and with ten you could get a rabbit.

Make a Maya chocolate drink



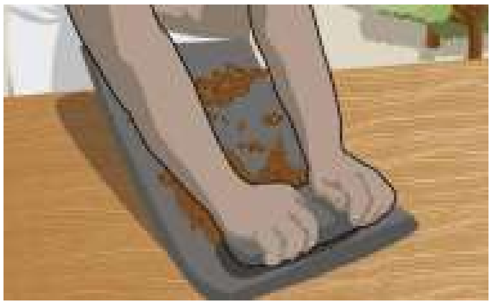
01 Harvest the cocoa

Cocoa beans are found in the fruit of the cocoa tree, called 'pods'. When the pods turn yellow, they are ready to harvest. Once you have brought home a basketful, scoop out the beans from the flesh and leave them to ferment for five to six days. They will then need to be spread out on an exterior surface to dry.



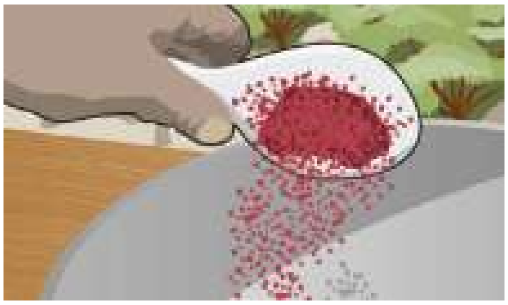
02 Roast and remove husks

Once the beans have dried out, you will need to roast them in a pottery griddle pan called a comal. This will crack the outer shells and allow them to be removed easily. To do this, you can use a technique called 'winnowing' in which the beans are tossed into the air. Ensure that all the husks are removed to prevent bitterness.



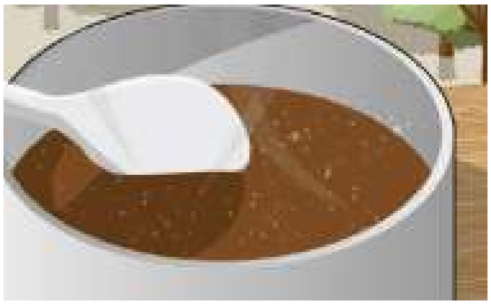
03 Grind the beans

Now collect the inner 'nibs' ready to be ground. You will need to work the nibs as much as possible using good old elbow grease with a 'mano' stone and a 'metate' stone mortar. When the nibs resemble no more than a paste, they are ready to be prepared for heating. It can take three to six hours of grinding for a really smooth paste to be achieved.



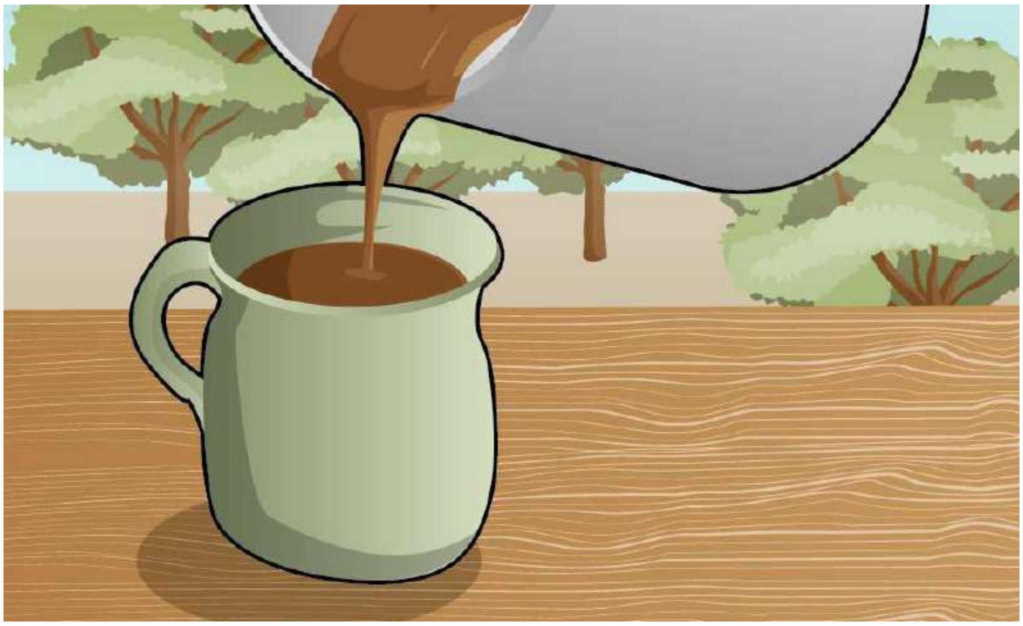
04 Add spices and flavour

If cooked as it is, the chocolate can taste quite bitter, so you will need to add plenty of flavourings to make sure it will suit your tastes. You could chop up some chilli peppers and throw them in for a fiery treat, or stir in some honey for a sweeter one. You will also need to add water and cornflour to the paste before it is ready to be heated.



05 Bring to the boil

The paste now needs boiling, so put it back in the griddle pan over an open flame. Be careful not to burn it or it's game over for your chocolate drink. Simmer until the sweet smell of cocoa fills the air, then make the mixture as frothy as possible by tossing the concoction between two bowls.



06 Cool and serve

The mixture should be served cold. The result will be a thick, tasty sludge of chocolaty goodness! If grand vessels aren't available, earthenware cups will do just fine, but remember, presentation is everything. If it all somehow goes wrong, the beans can be used as currency, so you can trade the leftovers for materials or animals.

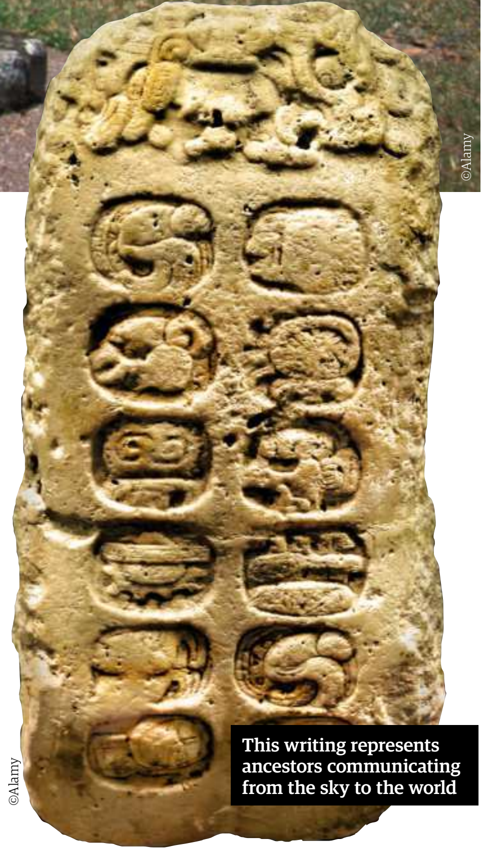
Free-standing carved stones were commonplace in Maya civilisation - this one is located in Pusilhá, Belize

MAYA WRITING

Classic Maya writing consisted of a complicated series of inscribed glyphs

WRITTEN BY DAVID CROOKES

©Alamy



This writing represents ancestors communicating from the sky to the world

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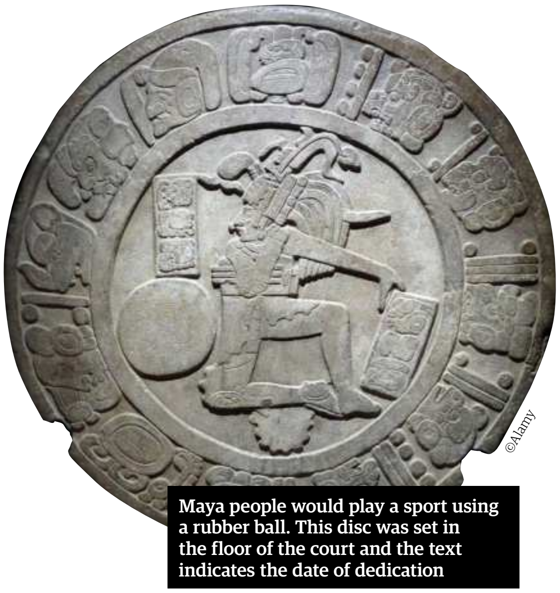


©Alamy

Maya people would play a sport using a rubber ball. This disc was set in the floor of the court and the text indicates the date of dedication

Deciphering the hieroglyphic writing system of the Maya has proven to be a difficult task for scholars. For several centuries they scratched their heads in bewilderment at the image sequences that adorned surviving public stone monuments, ceramics and bones. What's more, in seeking to get to the bottom of such writing - which was also carved into wood or committed to bark-paper folding books called codices - they were led down many an incorrect path for far too long.

Indeed, it is only relatively recently that scholars have been able to make sense of Classic Maya. They have been able to better study the three Mayan languages that were written down: Ch'olan, Tzeltalan and Yucatec. But in each case the Maya script displayed a high level of sophistication and complexity, and historians are still not quite at the stage of understanding it all.

In fact, it was only in 2005 that the origins of the Maya script was dated with any great certainty - taking it back to about 300 BCE, which is roughly at the start of the Classic period that ran between 900 and 250 BCE. Prior to 2005, common wisdom suggested it had evolved from the similar Isthmian script that was in use by the Olmec culture from about 500 BCE. But the earliest identifiable Maya inscriptions found at San Bartolo in northern Guatemala caused a rethink, pointing to Maya involvement in the Preclassic cultures of literacy.

A major breakthrough in the study of Maya writing came in the 1950s, courtesy of Russian linguist Yuri Knorozov. He had been studying the work of the French missionary and ethnographer Charles-Étienne Brasseur de Bourbourg, who, in 1963, announced the discovery of a 16th-century manuscript written by Diego de Landa, a Spanish bishop of the Roman Catholic Archdiocese of Yucatán, in Mexico.

Found at the Royal Academy of History in Madrid, Brasseur de Bourbourg had accepted that the text - *Relación de las cosas de Yucatán* - catalogued Maya words and phrases, and that it accurately corresponded Mayan glyphs to Spanish alphabetical letters. But Knorozov was less certain. His diligent study found that De Landa was actually corresponding the glyphs to phonetic values rather than letters. It was a breakthrough that led to greater understanding over the following decades.

It soon became clear that the Maya writing system made use of logograms in the main - that is, a set of written characters that each represent a specific word or phrase. Since the Maya people understood that it would be near-impossible to have one glyph for every item, concept and emotion they could think of, they also made use of syllabic glyphs. These were related to phonetic signs and meant that anything the Maya could say could also be written down.

At the system's simplest level, you could look at a glyph and instantly know what it was denoting: a jaguar, perhaps, or a snake, mountain or god. On the other hand, a glyph may be made up of syllables, representing sounds combining to form words, and this is where things became a touch more complicated, especially because logograms and syllabograms could be combined too.

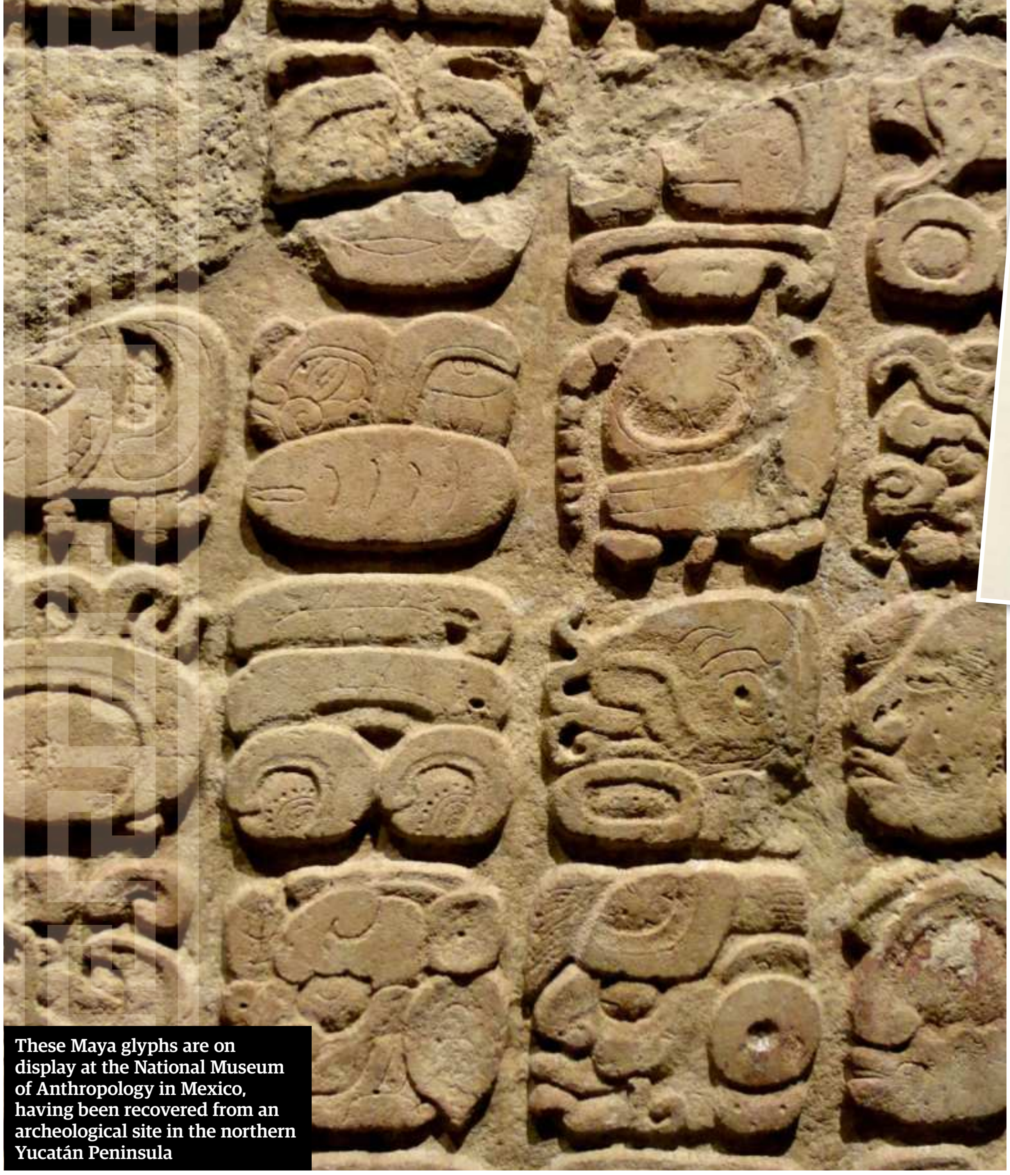
It was certainly possible to write the same word in different ways - jaguar, to retain an example, could be made up phonetically if the writer preferred not to use a logogram. Sometimes dissimilar logograms would mean the same thing as well. With single ideas able to be represented in multiple ways and some glyphs representing more than a single phonetic sound, context would play a big part in how they were deciphered.

Yet, since each of these logograms and syllabograms were hugely artistic, the end results became things of beauty, not least because there was a great deal of flexibility in the way the words could be created. At the heart of each one would be the main sign, with other signs known as affixes often tagged on, forming a glyph block. There could be anything between two and five combined glyphs with the affix positioning - to the top, left, right or bottom of the main - affecting the meaning.

To make things a little easier for the reader and the scribes, there were more than 1,000 different Maya signs, and yet just a third to half would only ever be used at a single point in time. The way they were written and read was consistent too. Although they were arranged glyph block by glyph block in a grid-like pattern, they were actually combined in paired columns of two.

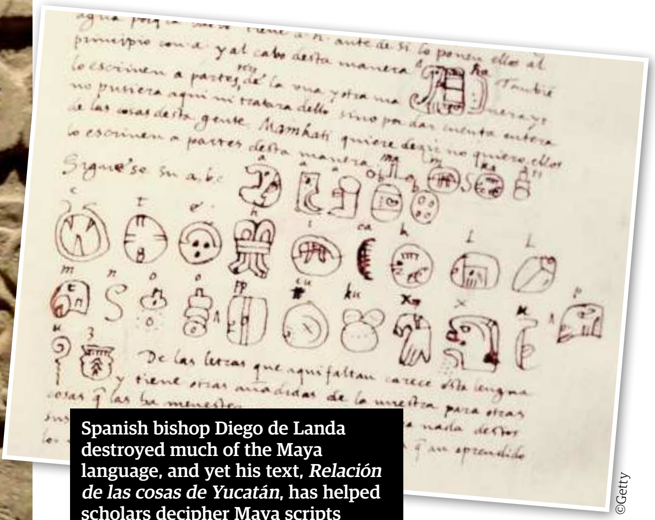
In each case, the reader would start from the top-left glyph block in the first column. They would scan their eyes right to the next block along in the second column, and then move down to the first column of the second row, taking in the glyph block to the right before zig-zagging down once more.

When those first two columns came to an end, the eyes would scan straight back to the top of



These Maya glyphs are on display at the National Museum of Anthropology in Mexico, having been recovered from an archeological site in the northern Yucatán Peninsula

Source: Wikipedia Commons ©Juan Carlos Fonseca Mata

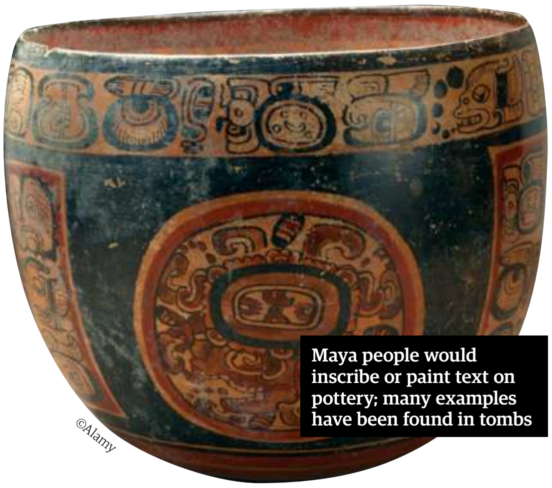


Spanish bishop Diego de Landa destroyed much of the Maya language, and yet his text, *Relación de las cosas de Yucatán*, has helped scholars decipher Maya scripts

©Getty

the grid, this time to the third column. Again, the order would be right, then down to the second line of the third column, right and down again. This would continue until the text came to an end, having moved to the fifth and sixth columns, seventh and eighth, ninth and tenth, and so on.

Through their writings, the Maya could explore objects and actions in sentences that typically followed a Date-Verb-Subject structure. They were able to make use of plurals, point to numbers and include adjectives and prepositions. There would also be clear pointers towards how a glyph block should be pronounced, while pronouns were attached for nouns, as well as transitive and intransitive verbs.



Maya people would inscribe or paint text on pottery; many examples have been found in tombs

©Alamy

As time went on, so the writing evolved. There is evidence that some symbols were simplified while others become more artistic, but clear communication was seemingly crucial, which is why we see a greater abundance of symbols representing whole words. Even so, reading was not a widespread skill among the Maya people. Educated nobles and priests were well versed in the written language but, while it would have been largely alien to most, recognisable symbols would have held strong clues as to the content.

The use of the system was helped by the reverence it attracted. De Landa thought that the Maya believed writing to have been the invention of the upper god and creator deity, Itzamna – a belief the Catholics suppressed as idolatry – and that it was generally used to record declarations of the kings and queens rather than as a creative endeavour. In fact, most of the ancient texts – or at least those that have survived – are centred on events. They looked at what was happening and when it took place, albeit as a way to reinforce military power and to paint leaders in a positive manner, particularly on stone monuments.

There are also four known books, or codices. The once-oldest surviving is the *Dresden Codex*, which dates to the 13th or 14th century and describes local history and astronomical tables over its 78 pages. The *Madrid Codex*, meanwhile, has 112 pages and also contains astronomical tables along with almanacs and horoscopes designed to assist Maya priests in their rituals and ceremonies.

Rituals form the bulk of the 22-page *Paris Codex* too, but perhaps the most interesting of the four is the *Maya Codex of Mexico*, formerly the *Grolier Codex*, which emerged in a private collection in the 1960s. Made from tree bark and dating to about the 10th and 11th centuries CE, the book attracted much debate over whether or not it was genuine, but experts declared it authentic in 2018. With only ten pages, it is now the oldest surviving codex.

Such works, alongside more matter-of-fact sculptural inscriptions, have been hugely helpful. When they are decoded, they help tell us much about the gods, royals, scribes, buildings, places, food and time periods of the Maya population. More so, experts, who stepped up efforts hugely in the 1980s and 1990s, now know the phonetic value of more than 85 per cent of the glyphs, even though they don't understand the meaning of them all. Mayan language dictionaries are building up nicely, and more than 90 per cent of Maya texts can be read with reasonable accuracy.

And yet, had it not been for the prohibition of the Maya writing system following the Spanish conquest, there would certainly be a lot more material available. Although the languages continued to be spoken, Maya texts were widely destroyed in the 16th and 17th centuries, and this is why there are just four codices in existence and why scholars have to rely on remnants of text on pottery and monuments.

Many examples are preserved in museums, but the world would have known so much more had the knowledge of the writing system been retained. With great diligence and much study over the past few decades, however, advances have been rapid, and there have been new discoveries. These, in particular, have brought fresh insights into the ways astrology impacted on Maya religion and prophecies. There is the potential for further revelations to come.

GET TO GRIPS WITH MAYA SCRIPT

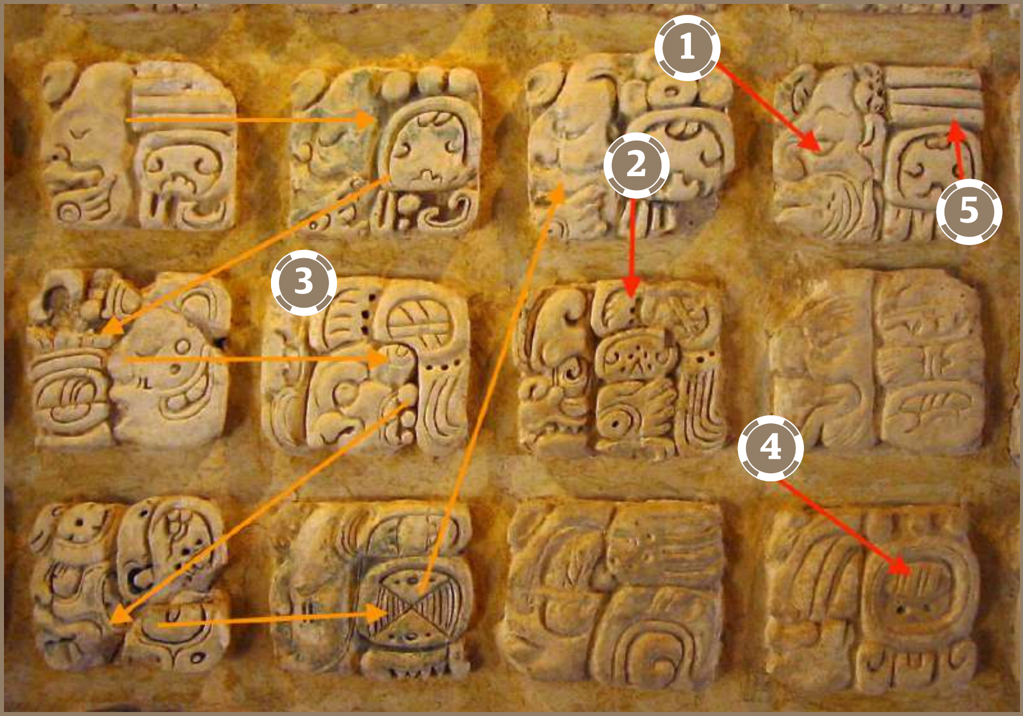
THEY MAY LOOK LIKE RANDOM PIECES OF ART, BUT MAYA SCRIBES WORKED TO A SET CONVENTION WHEN WRITING

THE MAIN SIGN

1 Each one of these glyph blocks was created in a similar way, with signs connected together to form words. The largest component in a block is referred to as the main sign.

DIFFERENT SYLLABLES

2 Some images are logograms and have a specific meaning. Others are syllabograms, or phonetic signs – these can be combined to create any word and attached to logograms too. Numbers are depicted as well.



EASY READING

3 Texts were intended to be read in paired columns, starting with the first two in a grid, reading left-to-right, before moving on to the second two until the end.

A CARTOUCHE

4 Some designs were surrounded by an ornate frame called a cartouche. This would indicate a date using a 260-day sacred calendar.

DIFFERENT AFFIXES

5 In addition to the main sign, other symbols could be added as affixes. Those to the left of the main sign were prefixes. Those above were superfixes, below are subfixes and, to the right, postfixes.

Discovered in 1931 in Yaxchilán, Chiapas, Mexico, this Maya lintel dates back to between 600 and 900 CE

©Getty

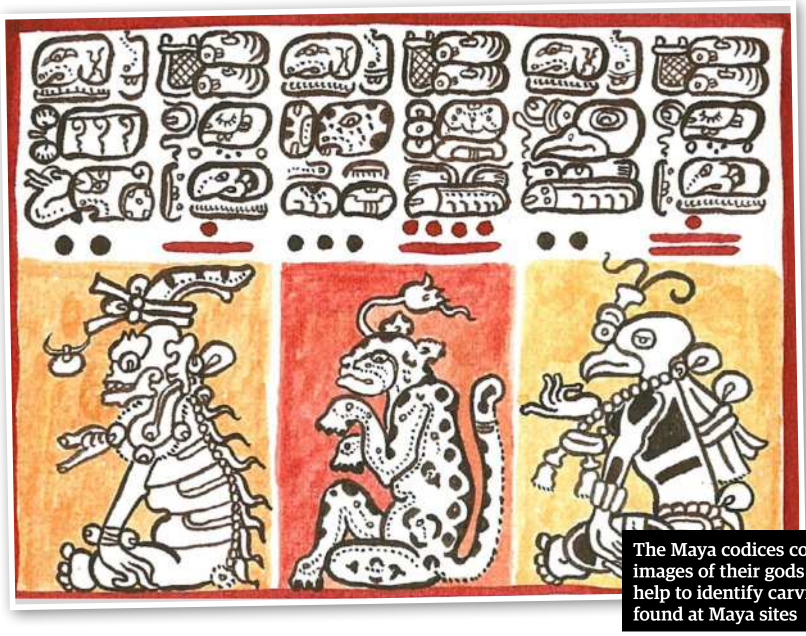
Many of the impressive temples of the Maya were built over the tombs of important figures

MAYA MYTHOLOGY AND RELIGION

For 3,000 years the gods and myths of the Maya united them with stories, rituals and sometimes bloody sacrifice

WRITTEN BY BEN GAZUR

Maya mythology & religion



The Maya codices contain images of their gods that help to identify carvings found at Maya sites

The Maya were not, and are not, a people unified by a single government. Over the 3,000 years of their history what has tied the Maya together is their shared language, culture and religion. The world of the ancient Maya was alive with gods, spirits and mythology, so religion played a vital role in everything from the construction of cities to the planting of crops. To understand the Maya properly we must understand the faith that shaped their lives.

To speak of Maya religion though is somewhat misleading, as everything undergoes evolution, and religion is no exception. Over the millennia the stories the Maya told themselves must have changed, and myths must have had variations from city to city. A comparison of these alternate versions of myths would be enlightening, but unfortunately we have comparatively little.

Though the Maya possessed the most sophisticated writing system to develop in the Americas, examples of it, especially those touching on religion, are rare. The coming of the Spanish saw attempts to convert the native peoples to the jealous god of the Christians that featured the wholesale destruction of their religion.

Diego de Landa is one of our best sources for Maya religious beliefs and practices at the time of the conquest, but, ironically, is himself one of the reasons we have so little material evidence. A Franciscan who rose to become Bishop of Yucatán, he found to his horror that a Catholic Maya was still offering worship to native deities. In the ensuing inquisition, Landa confiscated all the books and native idols he could. In the main square of the city of Mani, Landa had the books and statues piled together and burned. Landa claims that he burned 27 books of native religion. To put into perspective all that was lost on that fateful day for both the Maya and future scholars, today we only have three complete codices left that were written in Maya hieroglyphics.

The Maya gods often mixed human and animal features to represent aspects of nature outside of human control

Although it is possible now to decipher much of the remaining text written by the Maya, understanding the metaphorical meanings behind their religious works is not so easy. Much remains opaque. What we do know about Maya religion, though, reveals a lot about the classical age of the Maya people.

THE GODS

The gods of the Maya were fluid beings. With multiple forms of representation and a raft of names, it can be hard for us to follow which god is which. Itzamma was shown variously as a young man, an old man, and sometimes with the body of a bird. Within the iconography of the Maya, at various points he can be associated with the god of maize, a creator god, and with imagery of sacrifice. Was he all of these things, none of them, or is our concept of a god incompatible with ancient Maya beliefs?

Because of the flexibility of the Maya gods, not even scholars can agree on the number of known gods. One nameless god is often depicted in the dark underworld with an obsidian knife and surrounded by bones. This could be a form of Ah-Puch, a god of death, who was said to rule over the gloomy afterlife, but it could also be an unknown deity.

Our knowledge of the gods, where it is not recorded in the scant writings of the ancient Maya like the *Popol Vuh* and *Books of Chilam Balam*, comes mainly from their sculptures. From sets of repeated iconographic features we can build up theories of what gods represented. Buluc Chabtan was a god of war and sudden death, shown with black around his eyes and down one cheek. From comparing images of this god we can see him burning buildings, roasting people and fighting with the agricultural god Ekchuah.

The key roles of the gods for the Maya were in creating and sustaining the universe. If the gods failed to uphold the natural world, then disasters like floods, famines and earthquakes would be the terrible result.

CREATING THE WORLD

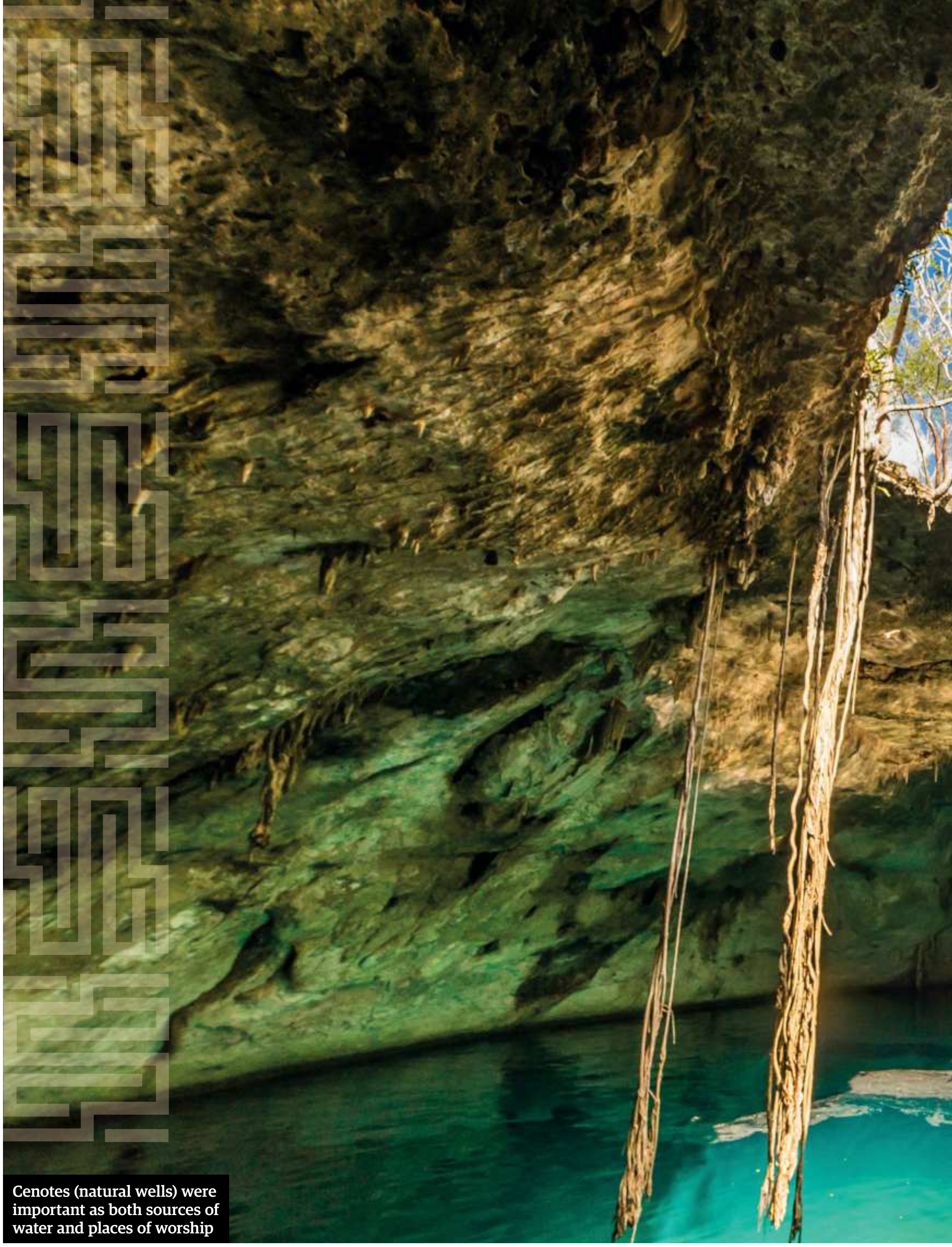
In the beginning there was water. This is what the *Popol Vuh* tells us about the Maya conception of the creation of the universe:

"Whatever there is that might be is simply not there: only the pooled water, only the calm sea, only it alone is pooled... Only the Maker, Modeller alone, Sovereign Plumed Serpent, the Bearers, Begetters are in the water, a glittering light... They are great knowers, great thinkers in their very being."

From the inchoate waters of the original chaos, the gods brought forth all that exists. The lush South American jungle that they created, however, did not please them. "Why this pointless humming? Why should there merely be rustling beneath the trees and bushes?" The gods then set animals into the jungle. Still they were not pleased. What is the point of being a god if you cannot be worshipped? "So now let's try to make a giver of praise, giver of respect, provider, nurturer," they decided.

The first humans were made by the gods out of mud, but these poor beings had crumbling bodies that dissolved in the rain. Next the gods tried wood. These people moved and had children, but there was nothing in their wooden minds or hearts, and they had no conception of the gods who had created them. A great flood was sent to wash them away. It was only on the third attempt that the Maya gods finally made the current race of humans. Taking malleable dough made from maize, they sculpted us and gave us life. For the Maya, maize was not merely a key crop that staved off starvation – it was the stuff of life itself.

The gods had created the Four Fathers who would found the great lineages of the Maya. After making a race to worship them, the gods then set down exactly what forms of worship these people would perform to honour, supplicate and invoke the deities who had created them.



Cenotes (natural wells) were important as both sources of water and places of worship

RITES AND RITUALS

For the Maya who lived before the arrival of the Spanish, their native gods were ever-present in their lives. Images of the gods were to be found everywhere. Landa, in his account of native religion, details the ubiquity of divine symbols in Maya culture. "So many idols did they have that their gods did not suffice them, there being no animal or reptile of which they did not make images, and these in the form of their gods and goddesses... As regards the images, they knew perfectly that they were made by human hands, perishable, and not divine; but they honoured them because of what they represented."

It was in front of images such as these and in temples that worship took place. Worship of the gods was necessary because humans owed a debt to the divinities. The gods had created humanity, and so they had to be propitiated to ensure its survival. This debt could be paid in many different ways, from song, to dance, to offerings of crops and bread, and even on the Maya ball game court. The most powerful offerings, however, were those of blood.

In the text of the *Popol Vuh* there is a tale of the Heroic Twins who descend to the underworld. After surviving being burned to death and ground into dust, the gods of death invite the pair to show off their skills again. Xbalanque obliges by decapitating his brother Hunahpu and then cutting out his heart – the familiar methods of human sacrifice to the Maya. He then brings his brother back to life using magic. The gods of death then ask for a turn. The Twins agree and kill the gods of death, but they do not bring them

back to life afterwards. From that day onwards there would be no more human sacrifices to gods of the underworld; they would have to make do with incense and animals.

Far more common, it would seem, than sacrificing others, was to offer up your own blood as a sort of self-sacrifice and mortification. Carvings show people making incisions into their own bodies, and Landa tells us, "At times they sacrificed their own blood, cutting all around the ears in strips which they let remain as a sign… They anointed the statue of the demon [god] with the collected blood."

Sacrifices were just one way the gods could be called on. Burning incense made from tree sap was another. We are told travellers would carry incense and a little plate to burn it on. When they rested for the night they would erect three flat stones and burn their offering to the god Ekchuah to ensure a safe journey. Fasts were also performed before religious rites, in which participants would not eat meat or have sex in order to purify themselves.

Emulating the gods in appearance was another common method of worship. The elites of Maya cities dressed in the same way that gods were shown in carvings. Children sometimes had their skulls bound to create an elongated head. This practice was known in many ancient cultures, but for the Maya it seems to have been an attempt to mould the child's skull into a shape similar to those depicted in images of the gods.

While everyone took part in the worship of the gods, it was to priests and diviners that the main duties fell. The priests acted as interpreters between the gods and humans. There were different levels of priest who performed different functions. High priests formed a hereditary class who wrote the religious texts, appointed other priests and acted as advisors to lords and kings. Lower priests were

HONOURING THE DEAD

THE LIVING AND THE DEAD SHARED A POWERFUL CONNECTION – AND IT WAS FOR THE LIVING TO PLACATE THOSE WHO CAME BEFORE

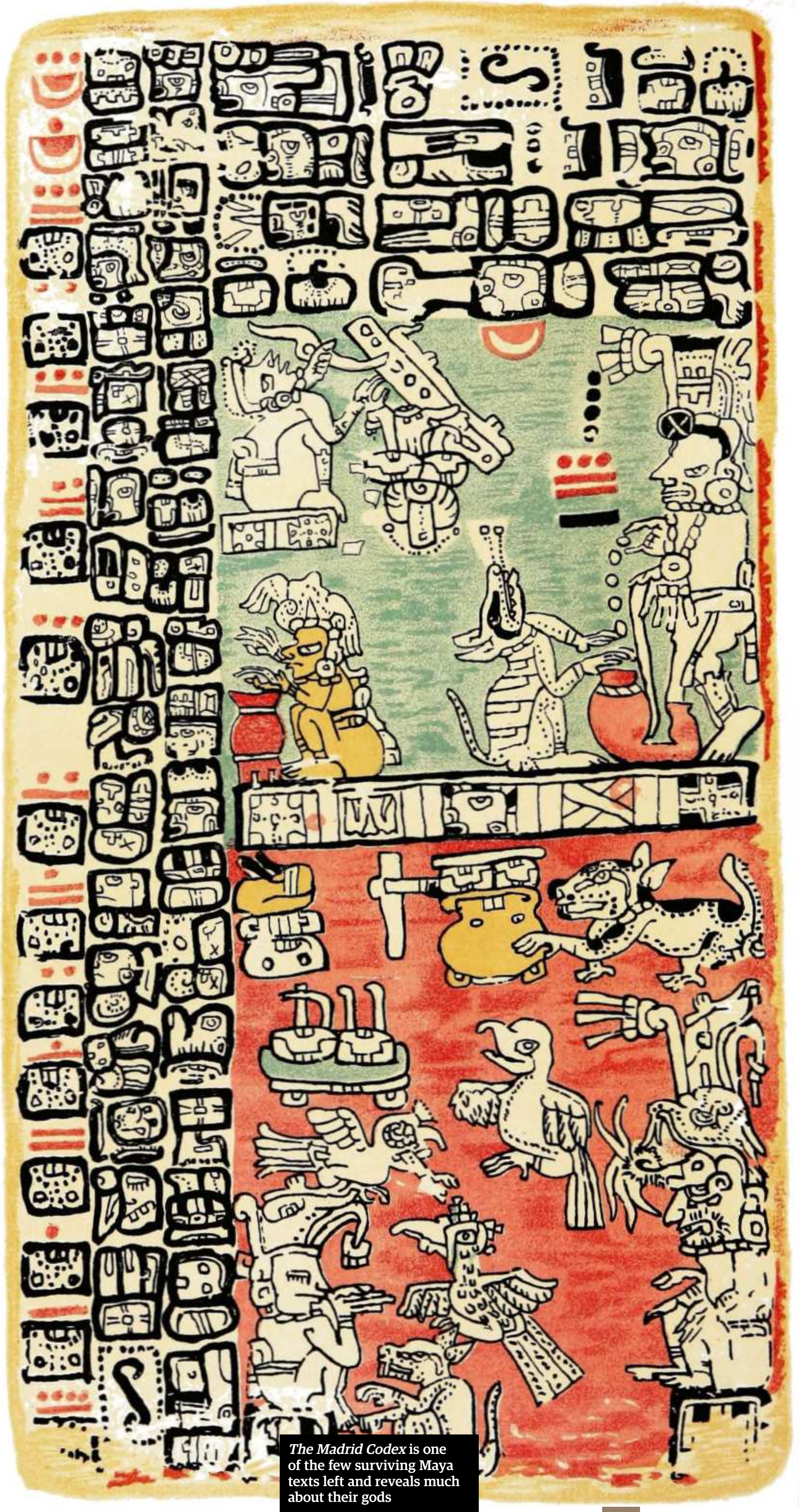
The Maya had a profound respect for death and for those that had passed from this world. A variety of burial methods and rituals were employed throughout the course of Maya history, but all of them show a tender care for the deceased.

Many Maya buried their dead underneath the floors of their homes. By including the dead within the household, it strengthened the family's bonds to the past and may (to Maya minds) have offered protection from evil spirits. With the burials, grave goods would be deposited, including jade and stone money meant to pay for their needs in the hereafter. For poor Maya, sometimes the only goods they carried into the afterlife was a tool marking their profession.

Elite burials could be far grander, and many of the pyramids and temples now standing began as graves for nobles and kings. At Tikal, the tomb of Jasaw Chan K'awiil I was used as the basis of the large pyramid constructed by his son Yik'in Chan K'awiil. These pyramids acted both as memorials and places of worship.

Cremation became popular in the centuries before Spanish arrival. Sometimes the ashes of the dead would be placed within a statue. On days when religious festivals took place, relatives would offer up food to the statue and the shade of the departed.

The Maya placed the cremated remains of their ancestors in statues or highly decorated urns



The Madrid Codex is one of the few surviving Maya texts left and reveals much about their gods

resident in each town and performed rituals for individuals and families. Priests who could divine the future were known as 'Chilam'. Landa describes how the Chilam "were charged with giving to all those in the locality the oracles of the demon [god], and the respect given them was so great that they did not ordinarily leave their houses except borne upon litters carried on the shoulders." Interpreting the complex sacred calendar was one of the central tasks of the priesthood. Over time the kings of the Maya kingdoms took on priestly roles that gave them spiritual as well as temporal authority.

A MAYA PILGRIMAGE

One of the features of Maya religion that most impressed the Spanish was their practice of pilgrimage. Being a familiar feature of Catholic worship, the invaders were able to understand the desire to visit holy places. "They held Cozumel and the well at Chichén Itzá in as great veneration as we have in our pilgrimages to Jerusalem and Rome; they visited them to offer gifts, especially at Cozumel, as we do at our holy places; and when they did not visit they sent offerings."

In the regions controlled by the Maya, water could be a scarce resource, as what rain fell was readily absorbed into the limestone of the ground. Wells to provide water had to be sunk deep into the earth and cisterns were dug to capture what rain they could. Naturally occurring wells, called cenotes, like the one at Chichén Itzá, became major sites of pilgrimage. Worshippers would honour the gods by leaving valuable items - or occasionally casting people in as human sacrifices. The Spanish were finally convinced that there were not great stores of gold belonging to the Maya when they saw that no gold had been left at these cenotes.

LIFE AFTER DEATH

Death was ever present to the Maya, but it was never seen as the end of their lives. Landa records that the Maya had a very strong belief in the immortality of the soul and in life after death.

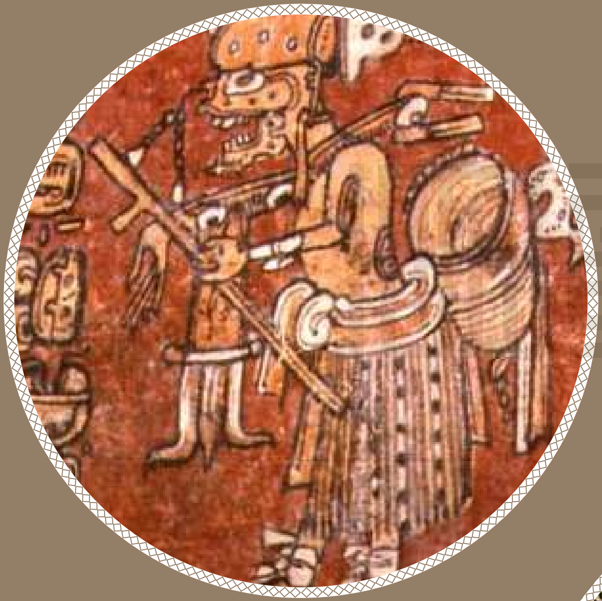
The afterlife was split into two parts. The heavens had 13 levels where those who were sacrificed or who had died in battle, childbirth or the ballgame went. If you were worthy of going to the good place after death, you would enter "a place where nothing would give pain, where there would be abundance of food and delicious drinks, and a refreshing and shady tree they called Yaxché, the Ceiba tree, beneath whose branches and shade [you] might rest and be in peace forever."

On the other hand, those who died ignobly or were wicked would enter a dark and forbidding place known as Mitnal or Xibalba. Here they "were tormented by demons, by great pains of cold and hunger and weariness and sadness." Because it was believed that the immortal soul could not perish, people either faced an eternity of peace or an existence of unrelenting agony after their death in the mortal world.

MEET THE GODS

WITH SO MANY GODS IT IS HARD TO KNOW WHO TO PRAY TO, BUT HERE ARE SOME OF THE MAJOR DEITIES OF THE MAYA

It is often stated that there are around 160 Maya gods that we know of, but pinning down an exact number is difficult due to the lack of sources and quicksilver nature of these deities. Among the heavenly host that we do know about, however, are some fascinating figures.

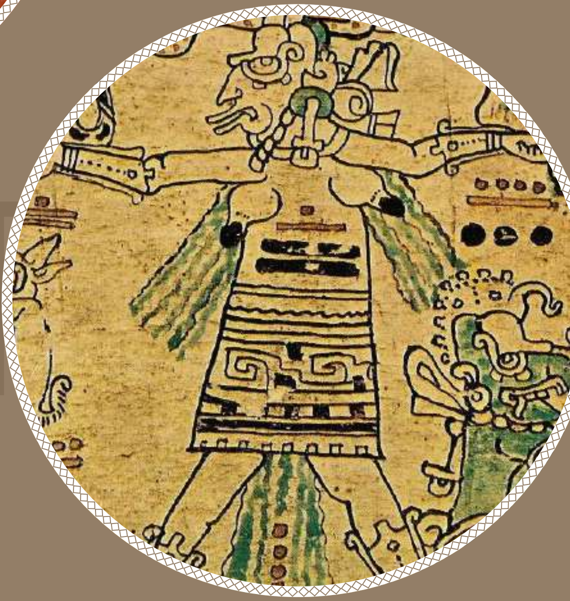


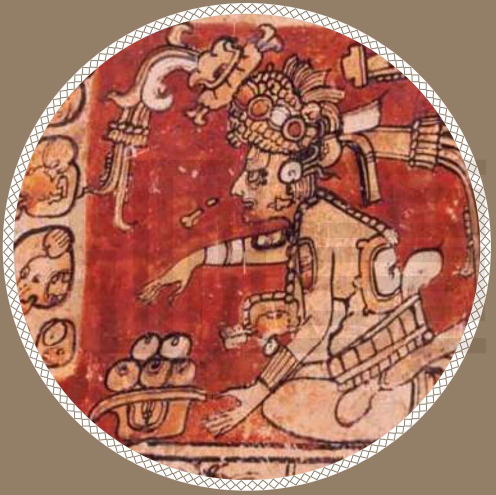
AH PUCH

One of the gods of war. Associated with darkness, death and calamity, yet also a patron of children and new endeavours. Also known as Cizin – The Stinking One – as the personification of decomposition.

IXCHEL

A goddess depicted as having powers over water but also creating children and rainbows. Despite her role in creating new life she is sometimes portrayed with claws and live serpents, perhaps acting as a goddess of war. Often shown as the companion of Itzamna.





ITZAMNA

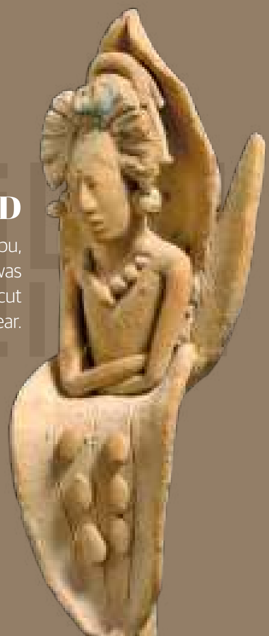
This god was considered to be the first priest and the figure who taught the Maya how to write. All of the knowledgeable skills such as medicine, art and agriculture were the gifts of Itzamna. One of the most popular gods.

CHAC

The god of storms and rain was a popular deity for an agricultural people who always lived on the edge of drought. One of the gods who was honoured by offerings in the waters of the natural wells called cenotes.

THE MAIZE GOD

Often associated with Hun-Hunahpu, father of the Heroic Twins. Died but was resurrected by his sons, just as maize is cut down but is reborn from the soil each year.

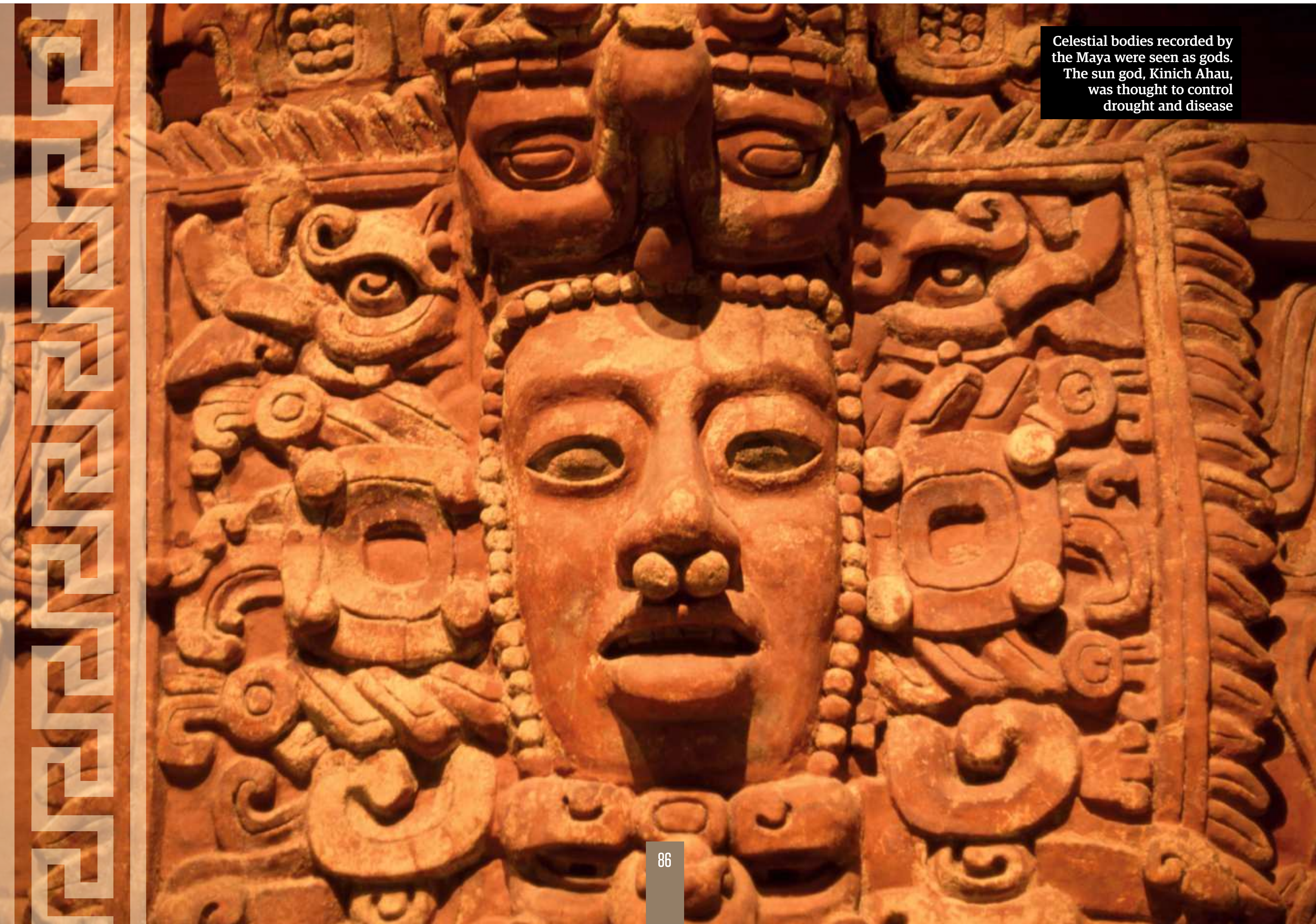


Metropolitan Museum of Art

SCIENCE IN MESOAMERICA

How the Maya mapped the stars, performed complex calculations, tamed their land and healed their sick

WRITTEN BY SCOTT DUTFIELD



Celestial bodies recorded by the Maya were seen as gods. The sun god, Kinich Ahau, was thought to control drought and disease

It is believed that the Maya saw the Milky Way as a pathway for souls to travel to the afterlife

Long before Galileo Galilei first looked through the lens of a telescope, the Maya had been cataloguing the stars for hundreds of years. The Maya were highly skilled astronomers, and their everyday life was influenced by the movements of the Sun, Moon and other celestial bodies.

The astronomical work of the Maya was well documented in a series of bark-paper codices, but most of these were destroyed during the Spanish conquest. There are only four surviving examples left in the world today: the Paris, Madrid and Dresden codices and the *Maya Codex of Mexico*.

Between the pages of the *Dresden Codex*, skywatchers recorded the movements of the different celestial bodies across the heavens. The Sun, Moon and stars in the sky were attributed to the divine, each playing their role as gods, watching over the land below. The Maya believed (as did many until the 16th century) that Earth was at the centre of everything. This meant when a planetary god appeared in the sky, it was a signal to the Maya below.

For example, the brightest being in the sky (the Sun) was Kinich Ahau, the most powerful god in Maya religion. By keeping track of Kinich Ahau's movements, skygazers observed and recorded the yearly cycle of the Sun, including equinoxes and solstices. The Moon, however, was believed to be the goddess Ix Chel and was thought to send Kinich Ahau to the underworld at night.

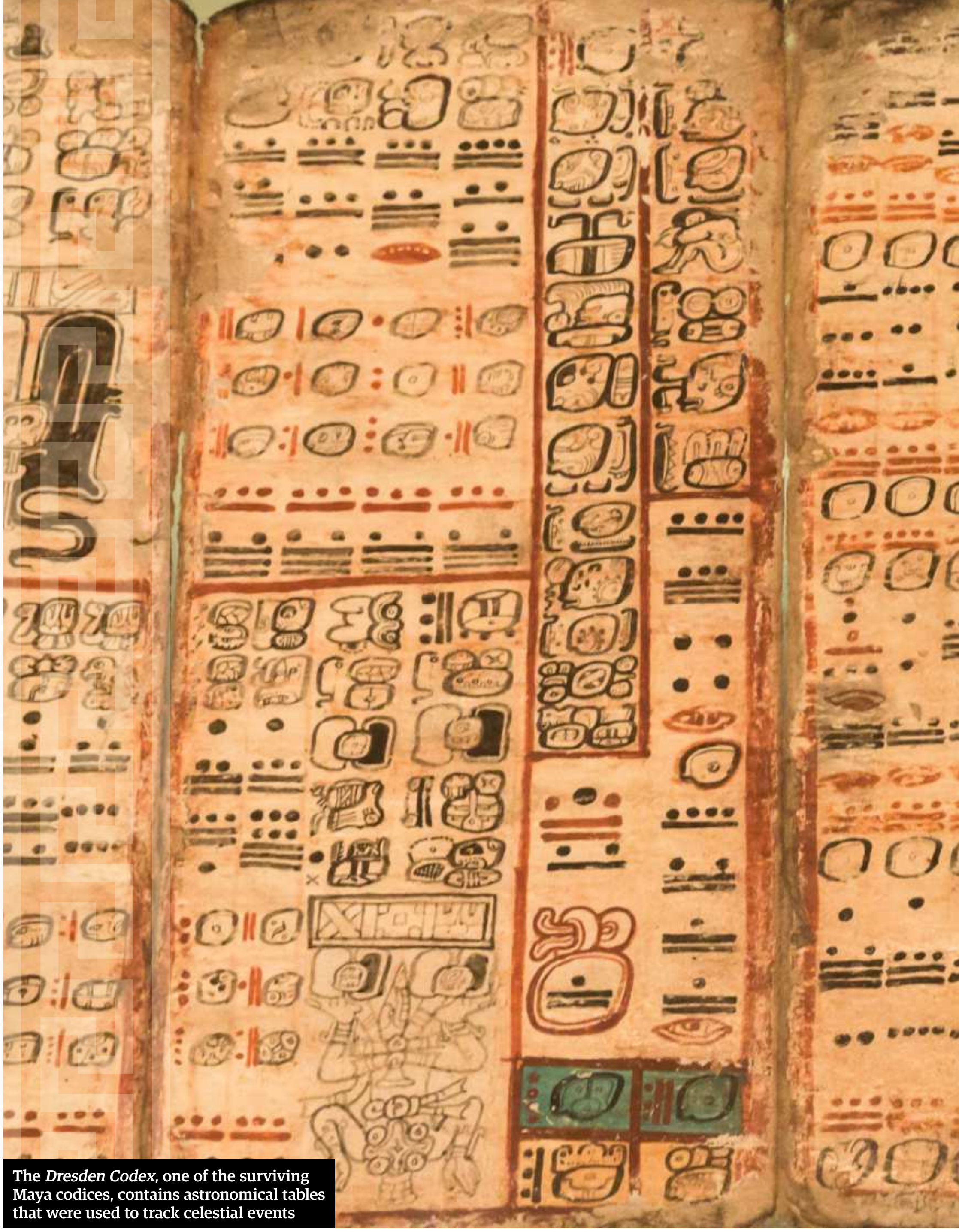
The *Dresden Codex* also revealed detailed charts of heliacal risings of many stars and planets. This is when a star will annually rise at the eastern horizon at dawn. However, one particularly bright planet caught the attention of the Maya: Venus. This planetary neighbour was closely monitored, and its movements dictated the timings for their many religious rituals. The *Dresden Codex* revealed that the Maya measured the synodic period of Venus (how long it takes to return to the same observable position in the night sky from the perspective of Earth) to be 584 days, only two hours off the modern-day calculations – an astonishing level of accuracy considering they had no telescopes.

As well as documenting the movement of the Sun and other planets, the codices also contain predictions of when lunar and solar eclipses could occur. As a deeply religious civilisation, the Maya considered an eclipse to be an ominous sign, one often interpreted and depicted as a demon devouring the Sun or Moon. The predictions helped provide the Maya with warnings of when eclipses were likely to occur, allowing them to prepare for the rituals (very often blood sacrifices) that they believed would keep them safe. The *Dresden Codex* contains predictions for every solar eclipse and the majority of lunar eclipses – regardless of whether they would be visible from Maya lands – for a period of 33 years. The table of predictions was intended to be recycled after this. In fact, it could have been used up until the 18th century: not bad for a manuscript that's estimated to have been written between 1200–1250 CE.

Venus' cycle and eclipse events weren't the only calculations the Maya were able to make with impressive accuracy. Using their complex solar calendar, called the Haab', the Maya calculated that one Earth year lasted for 365.2420 days, while a lunar month was found to be 29.5308 days. These are remarkably close to the modern-day values of 365.2425 days in a year and 29.53059 days in a lunar month – amounting to errors of just 43.2 seconds and 18.1 seconds respectively.

Although Maya astronomy focused predominantly on tracking the movements of larger celestial bodies, many other night sky observations were also documented in the Maya codices. While looking up towards the stars you might recognise some of the many constellations

> **"THE SUN, MOON AND STARS WERE ATTRIBUTED TO THE DIVINE, EACH PLAYING THEIR ROLE AS GODS, WATCHING OVER THE LAND BELOW"**



The *Dresden Codex*, one of the surviving Maya codices, contains astronomical tables that were used to track celestial events

we use to map the night sky, such as the Greek hunter Orion or the twins representing the zodiac Gemini, for example. When looking at the same sky around the 12th century, the Maya had their own constellation characters. What we see as Orion, they saw and mapped as The Turtle, and Gemini corresponded closely to what they referred to as The Owl. Much more than marking shapes in the stars, constellations played a role in shaping the Maya agricultural calendar. Due to the way the Earth rotates around the Sun, during seasonal changes different constellations appear in one given place. This shift in star patterns signalled either the warmer or cooler season that followed, which the Maya used to their advantage when growing food. Constellations were also used as navigational aids when travelling at night.

While the Maya may not have had observational aids such as telescopes, they did have purpose-built observatories. One such example, called El Caracol, can still be seen today in the ruins of Chichén Itzá. At first glance it looks rather similar to some modern-day observatories – an elevated, cylindrical tower with a domed top. El Caracol was constructed circa 900 CE, and scholars believe it was a place for people to view the celestial realm through precisely placed holes in the dome, aligning perfectly with the movements of their most-studied subjects, such as the Sun and Venus. Unlike the other structures in Chichén Itzá, the entrance of the El Caracol faces 27.5 degrees north of west, which aligns with Venus' northernmost position in the sky. What's more, the diagonal line between the observatory's northeastern and southwestern corners aligns with the summer solstice sunrise and the winter solstice sunset. Their appreciation of Venus also influenced other aspects of Maya architecture. For example, the Governor's Palace (a royal residence) in Uxmal was built in a prime location for viewing of the 'evening star'.

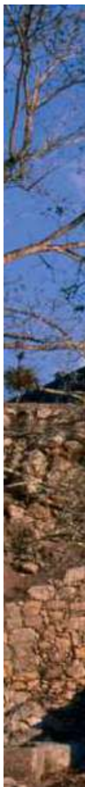
Their knowledge of the Sun, Moon and stars meant that the Maya could predict the seasons, and this knowledge made them successful farmers. The Maya were largely an agricultural society, with the majority of people working the land. Thanks to a detailed calendar system, they knew when to plant and harvest different crops. The Maya also used a variety of innovative land-management techniques, such as terrace farming (to increase the amount of arable land area on hillsides), raised field farming (to create small islands of land in wet regions) and slash-and-burn farming (to re-fertilise over-used land with the nutrients in ash).

However, the Maya became so successful in farming that it may have been a factor in their downfall. Better farming led to food security, which promoted an increase in population, which in turn led to further demand for food and over-exploitation of the land. A reliance on farming made the Maya particularly vulnerable to long periods of drought, which historians believe played a role in their collapse.

Similar to other Mesoamerican cultures, including the Olmecs and Aztecs, one of the Maya's most notable scientific achievements was producing stabilised rubber – thousands of years before Charles Goodyear famously invented the vulcanisation process. Native rubber trees were a sacred symbol for the Maya people and provided them with a bounty of latex. After harvesting the liquid latex from the trunk of the rubber tree, the Maya discovered that when mixing it with the juice of another plant (the morning glory vine) the latex didn't dry into a brittle solid, as it would naturally. Instead, the two reacted to form a bouncy material. The Maya used this material to make rubber balls for sports.

Further exploring the properties of morning glory vines, the Maya discovered another property they deemed useful. Morning glory was found to induce a hallucinogenic state, and it was used to alter the level of consciousness during rituals and healing ceremonies. The Maya typically ingested extracts of other potent hallucinogenic plants such as Lonchocarpus and psychoactive mushrooms, sometimes even employing ritual enemas to achieve a trance-like state.

As healers, the Maya developed several innovative practices. Maya physicians used herbal remedies to treat common ailments such as athlete's foot and digestive problems. They also employed sweat baths (similar to modern saunas) to 'cleanse' the body of impurities. However, their most impressive medical developments were in surgical procedures, from using casts to aid the healing of broken bones to implanting iron pyrite tooth fillings and even stitching deep wounds with real hair sutures. The most knowledgeable members of Maya society, known as shamans, displayed a remarkable aptitude for understanding the human body and how it healed.

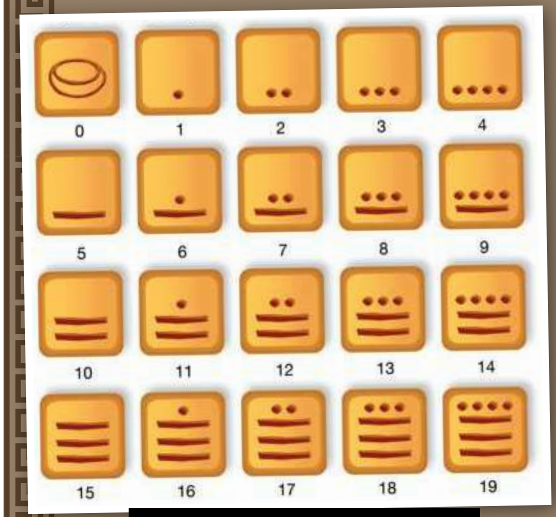


El Caracol at the ruins of Chichén Itzá in Mexico is one of the world's oldest observatories

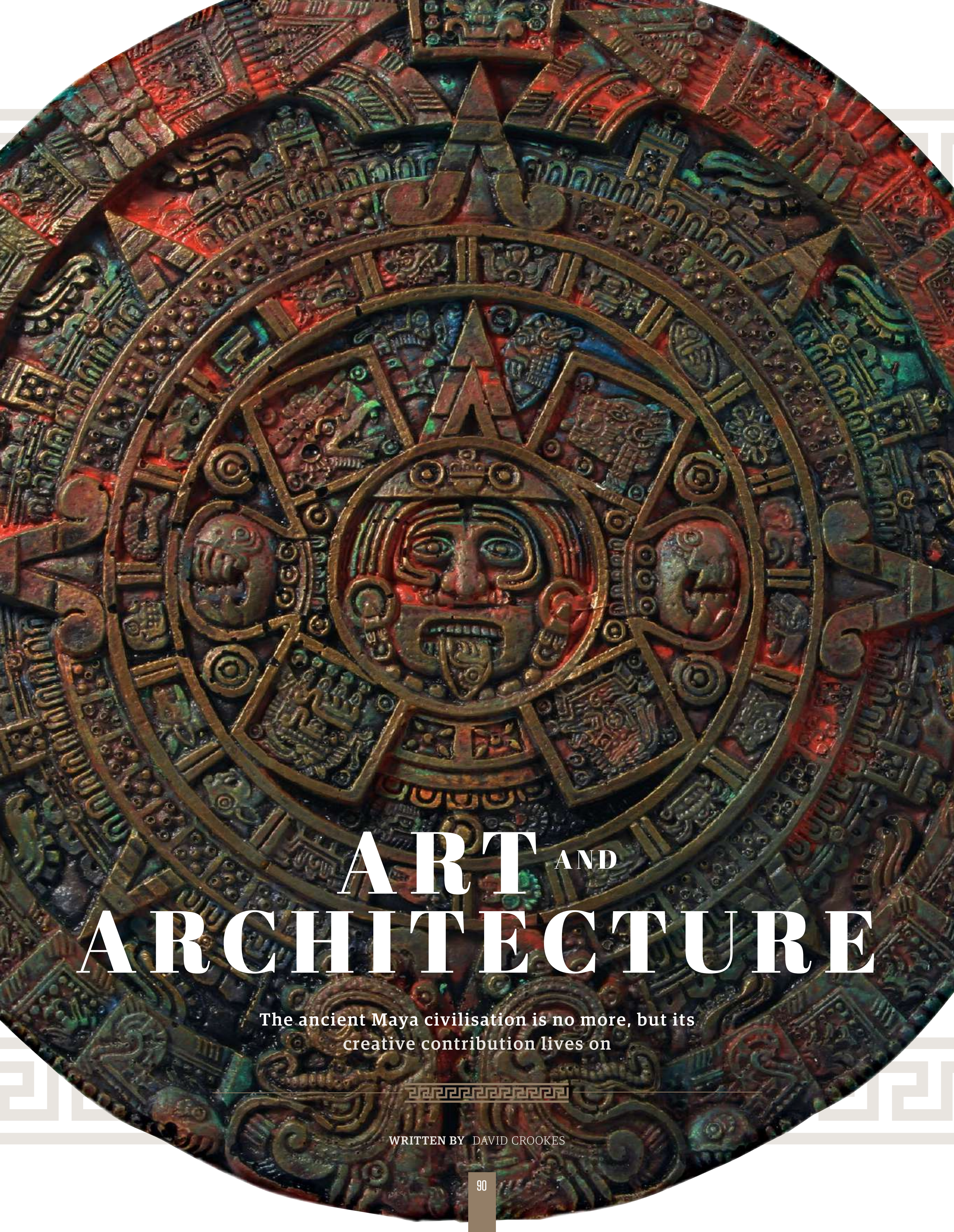
MAYA MATHEMATICS

DISCOVER HOW ONE OF THE WORLD'S MOST INNOVATIVE NUMERICAL SYSTEMS WORKED

The Maya would not have been able to become so proficient in astronomy, nor develop their complex calendar system, without a firm grasp of mathematics. Building on existing Mesoamerican mathematical systems, the Maya used a vigesimal counting system, which is a base-20 system, rather than the decimal base-10 system that we use today. Instead of having defined numerals for the single digits, such as 1, 2, 3 and so on, Maya numerals consisted of a series of dots and horizontal lines (see the examples in the image below). A lone dot represented a value of one and a line represented a value of five. In a similar way to how we write numbers horizontally, working from right to left from the ones, to the tens, the hundreds and so on, the Maya wrote their numerals in vertical tiers, working upwards as values increased to the next power of 20. On the bottom tier, they would write the values up to and including 19 (four dots above three lines). Then as the number increases dots and lines are added to higher tiers vertically in increments of 20 (20^1), 400 (20^2), 8,000 (20^3), 16,000 (20^4) and so on. For example, 29 would appear as four dots above one line in the lowest tier and a single dot in the tier above, while 429 would read as four dots above one line in the lowest tier, a single dot in the tier above and another dot in a third tier. Just as we would write 429, representing 400+20+9, for example, the Maya applied the same logic by vertically combining the values of their numeral glyphs. It's also believed that Mesoamerican cultures were among the first to develop the concept of zero, and the Maya depicted it in the numeral system as the glyph of a shell.



Maya numerals were made up of simple combinations of dots and lines



ART AND ARCHITECTURE

The ancient Maya civilisation is no more, but its creative contribution lives on

WRITTEN BY DAVID CROOKES

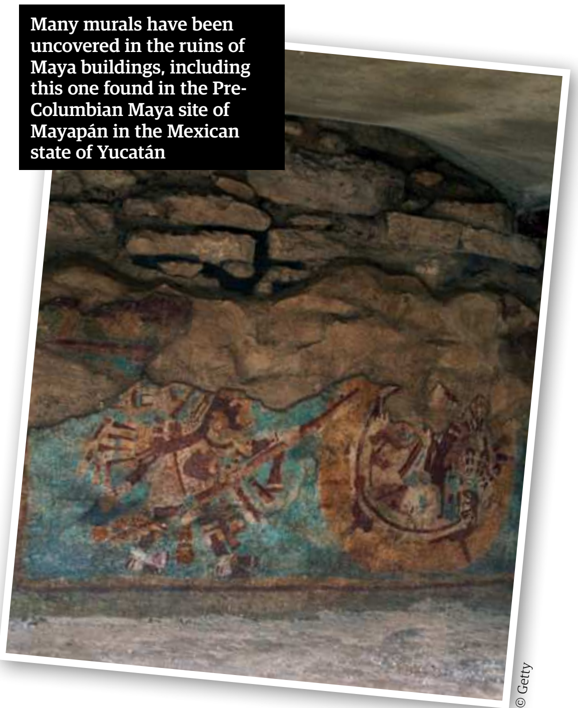
RECORDING MAYA LIFE

MURAL PAINTINGS UNCOVER ANCIENT MYTHOLOGY AND DAILY MAYA ACTIVITY

Ancient Maya painted elaborate murals on the walls of many buildings, creating bold artworks that were both visually arresting and a reflection of contemporary life. In the majority of cases, these colourful murals would depict the lives of the ruling class and they would typically highlight the rituals carried out by deities, acts involving royalty and battles. Archaeologists have seen vivid examples of these. Three rooms in an ancient ruin at a site called Bonampak in the rainforest of Chiapas, for example, date to 790 CE and show vividly colourful images of war, sacrifice, music, rituals and celebrations. The Painted Murals in the Pyramid of the Paintings in San Bartolo in Guatemala date to the late Pre-Classic period between 250 BCE and 250 CE and show mythological scenes relating to the maize god.

In 2009, however, archaeologists were excavating a pyramid mount structure at Calakmul, Mexico, when they discovered murals showing ordinary Maya going about their daily business. It was the first time mundane tasks such as preparing food had been seen in such a Maya mural. Four years later, archaeologists were again thrilled when they found murals on the walls of a work space for the town's scribe in Xultún, Guatemala - the first time Maya art was found on the walls of a house.

That these even exist is lucky, though. Most Maya paintings have been destroyed by the area's hostile, humid environment, although those coloured with the unique Maya blue pigment (used until the 16th century) have avoided becoming faded over time.



Many murals have been uncovered in the ruins of Maya buildings, including this one found in the Pre-Columbian Maya site of Mayapán in the Mexican state of Yucatán

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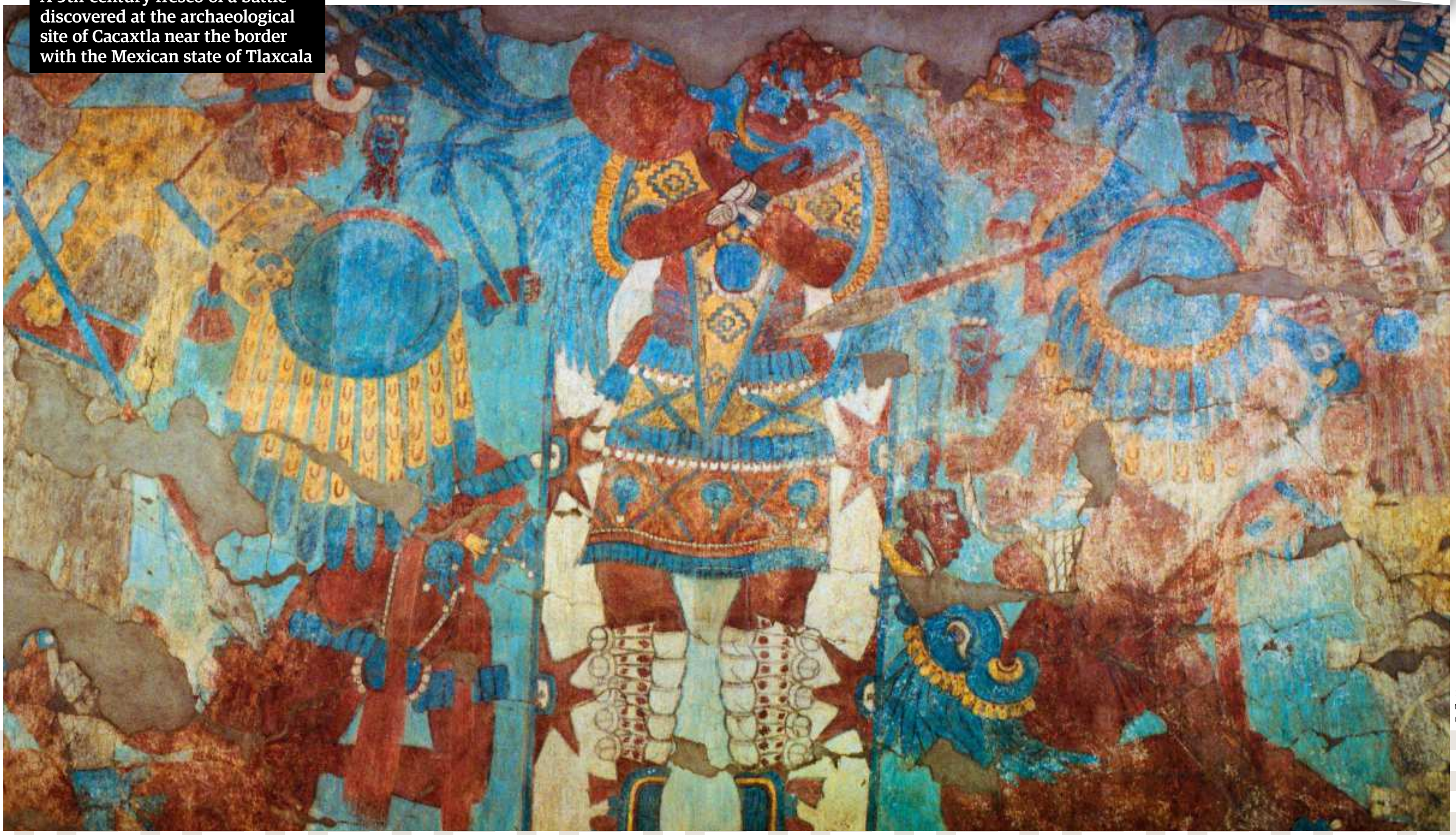

A 9th-century fresco of a battle discovered at the archaeological site of Cacaxtla near the border with the Mexican state of Tlaxcala

© Getty

SET IN STONE

MONUMENTAL STONE SCULPTURES WERE INCREDIBLE HANDCRAFTED PIECES OF ART

Although wood carvings were once believed to be common, very few examples have made it through to today. The Mirror-Bearer figure dating back some 1,425 years to the Early Classic period is perhaps the best preserved, but there will have been many symbolic wooden depictions of gods and kings lost to time, as well as many of those made of fired clay, shell and bone.

Stone sculptures, on the other hand, have survived in far greater numbers. Most abundant were stelae - tall slabs found throughout the Maya region that were adorned with writing and carvings. They had their origins around 400 BCE and were usually positioned close to altars. Most would show rulers, typically in the guise of gods, and artists would be commissioned to make them.

Sculptors would interpret their human subjects in a naturalistic manner, and some would sign their work. They would sculpt using chisels, blades and polishing stones, working in some cases to incredible detail on structures that could measure more than ten metres in total. Sculptures would also be created for wall panels or be fitted across doorways, and it was known for the ornamental mineral jade to be used as a material too.

A cylindrical vessel possibly depicting a special event in the life of a Maya ruler between 600 and 900 CE

© Getty

Modern Maya continue to weave their colourful materials using backstrap looms at markets

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DRESSED TO IMPRESS

COLOURFUL AND WELL-CRAFTED, MAYA TEXTILES CERTAINLY STOOD OUT

All Maya women would learn to weave, but only those of a high rank would be skilled enough in the art to produce the finest clothes. Although hemp fibre and pounded bark cloth were used, the elite class would work with top- quality cotton cultivated on the Maya lowlands, one naturally brown and the other more white. The fibres would be cleaned, spun into threads and dyed vivid colours, Maya blue proving to be the most prestigious. They would then be woven using a backstrap loom - a primitive technology made up of sticks, yarn and the body of the weaver.

This allowed for some very intricate pattern weaves that would have been unique to particular communities. The women would infuse the cotton fabric with glyphs, shapes and images, and they would use it to create loose-fitting, tunic-like dresses called huipils. Each would have borders around the openings and the hem, and they'd usually be worn with a skirt (a corte) as well as a decorated belt (faja). The higher the rank, the more elaborate the clothing; this can be seen in images and sculptures of the elite classes.

COMFORTABLE IN THEIR SKIN

MAYA BODY ART WOULD BE A SIGN OF STAMINA AND BEAUTY

Tattoos were definitely not taboo among the Maya. In fact, they associated the deity Acat with the practice, and they believed that decorating their body in the most elaborate of ways not only made them look more beautiful but would place them firmly within the sphere of a god's power and grant them great status as individuals.

As such, a good number of men and women were more than happy to endure the intense pain of a tattoo, and those who went through the process would ask Acat to bless the needles, ink and the tattoo artist - not least because some would become very ill through infection, having had the design painted and effectively pierced into their skin.

Top-choice tattoos were largely symbolic. They'd depict gods or spiritual emblems as well as powerful animals such as eagles, plumed serpents and jaguars. Men would wait until they were married before tattooing their whole bodies and faces, while women would confine them to the upper body and keep them away from their breasts.

Sharpening of teeth, sometimes in combination with designs engraved into the enamel, was also popular, as were piercings of the ears, lips, septum and nose. Again, this enabled a person to highlight their social status, with the wealthiest wearing jewellery made from nephrite, jade and jadite. Those of a high status would also try to force the visual condition strabismus (cross-eye) on their infants and seek to flatten their child's forehead.

© Alamy

The ancient Maya are renowned for their elaborate body art and jewellery, with bone or wood often used

© Alamy

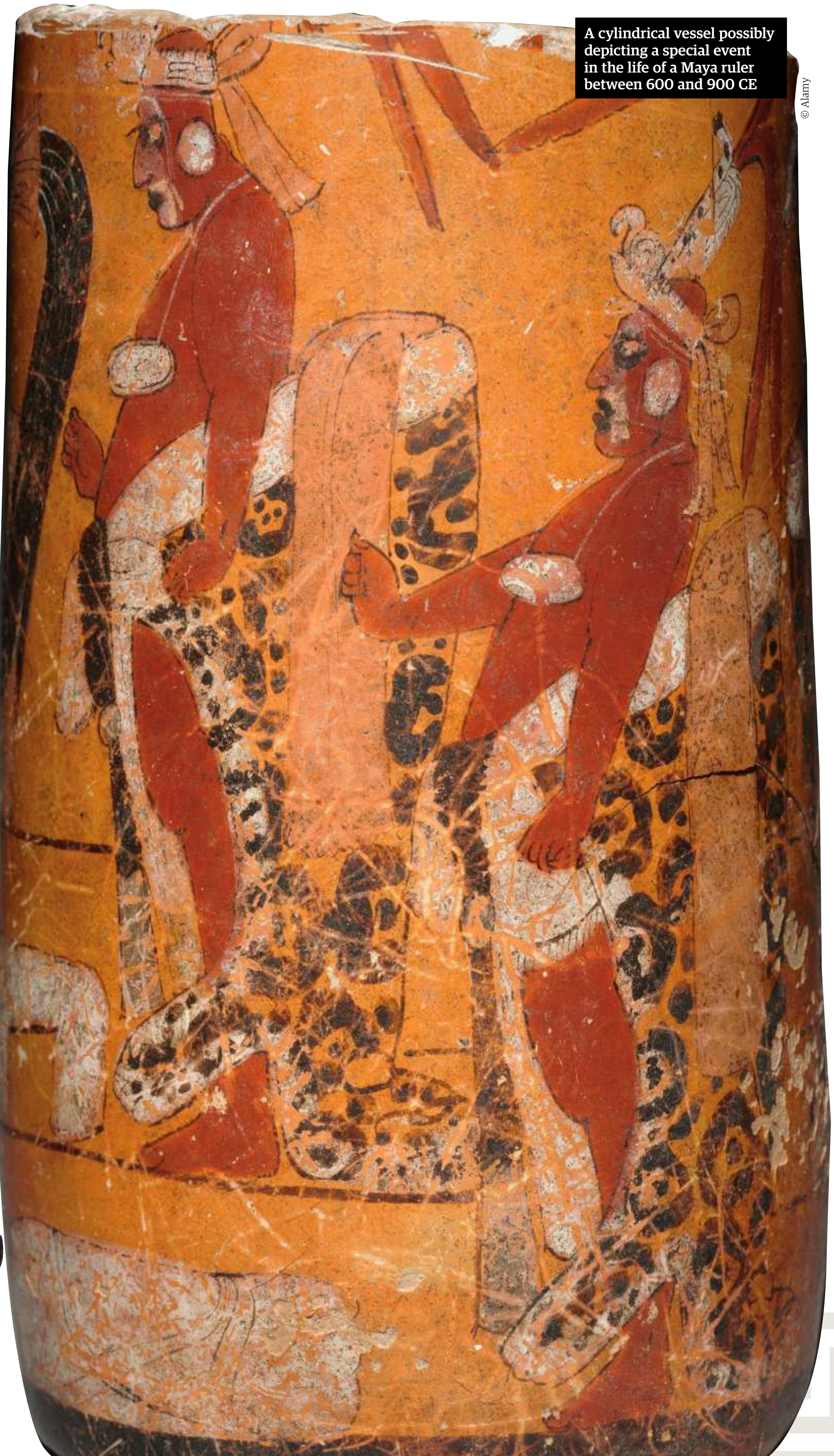
POTTY FOR POTTERY

DECORATIVE CERAMICS CAME IN MANY DIFFERENT SHAPES

In 2019, archaeologists were working at the site of the former Maya city of Chichén Itzá in the Mexican state of Yucatán when they came across around 200 ceramic vessels dating back to about 1000 CE. They were well-preserved and included 155 braziers and incense holders bearing the likeness of the rain god, Tlaloc. But then, the Maya liked to make their pottery attractive, since they were not just vessels to be used, they were objects to be desired in both life and death.

Handmade using local clays and often tempered with volcanic ash, the potters enjoyed experimenting, and their ceramics evolved as they became more skilled and receptive to changing times. Plain-looking vessels would gain mottled detail through processes such as altering the temperature at which they were fired. Attention was also paid to fine proportions, simplicity and style, although there were attempts to make ceramics particularly eye-catching, perhaps by adding feet to create tetrapod bowls, moulding items of varying shapes and sizes, or producing items laden with painted symbolism. Some would contain pellets so they could double as instruments during meals.

Globular vessels called tecomates were always popular (providing a good surface area for art too) and many containers made in the form of animals have been discovered. How much care and attention went into a ceramic would often reflect the status of the eventual owner – the elite classes prized ceramics and gave them as gifts or placed them at the centre of lavish feasts. The very best pottery usually went with the owner when they were buried, which is how many have been found.


A cylindrical vessel possibly depicting a special event in the life of a Maya ruler between 600 and 900 CE

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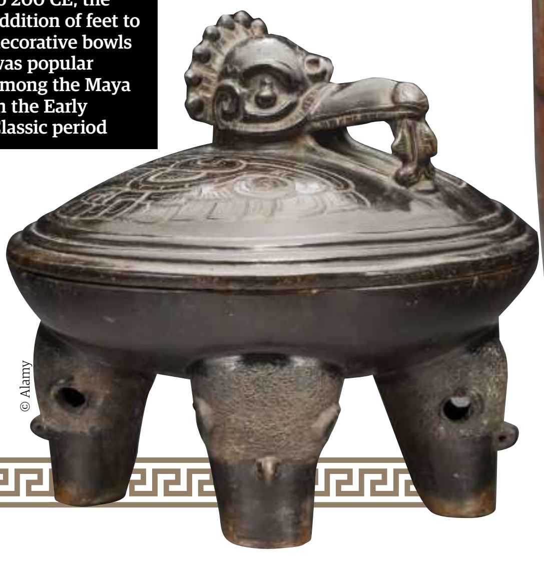
Dating back to 200 CE, the addition of feet to decorative bowls was popular among the Maya in the Early Classic period

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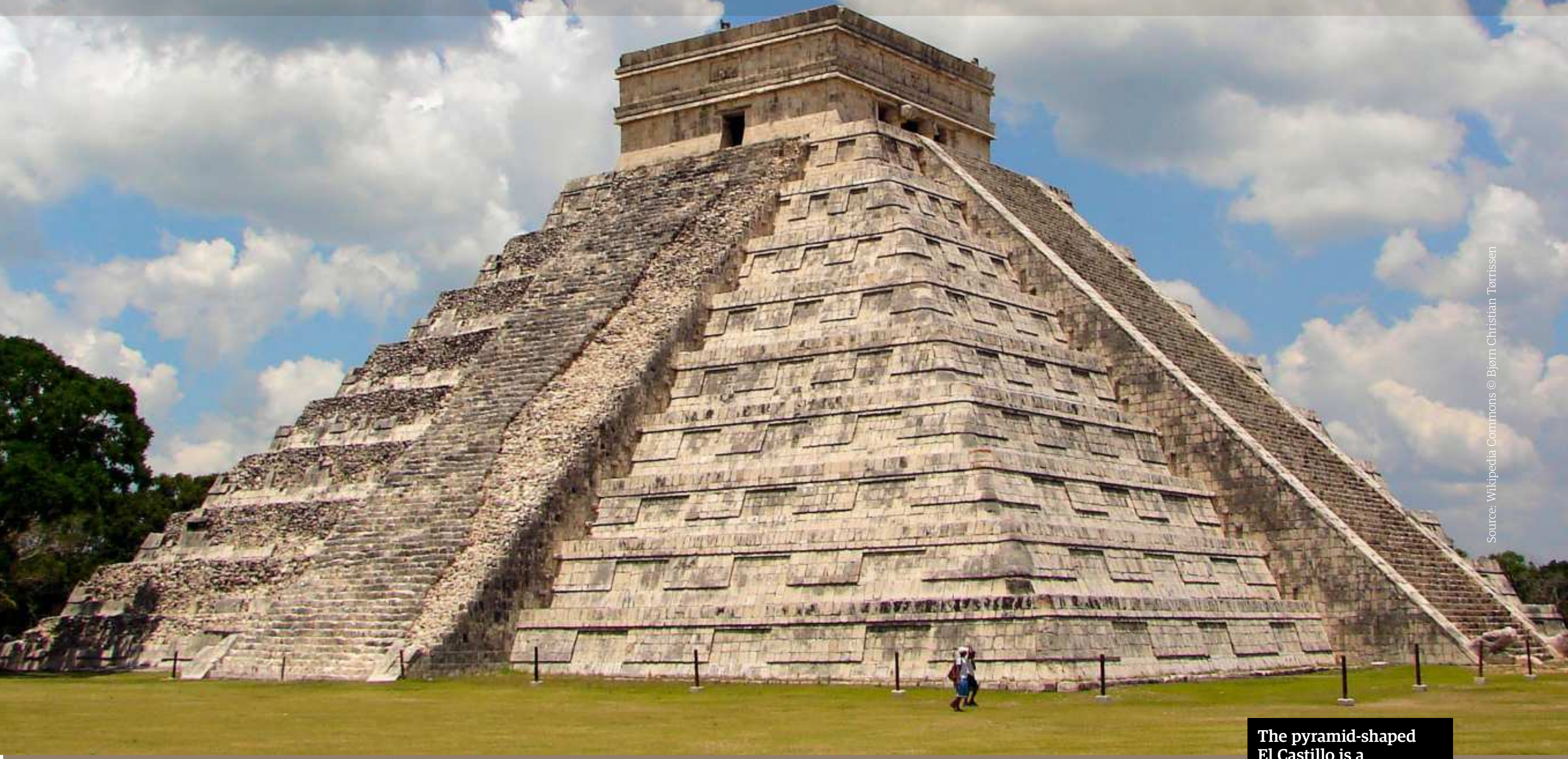

Source: Wikipedia Commons © Bjørn Christian Tørrissen

The pyramid-shaped El Castillo is a standout example of Maya architecture at the Chichén Itzá archeological site

CONSTRUCTING ICONIC BUILDINGS

TOWERING MAYA ARCHITECTURE HAS STOOD THE TEST OF TIME

Maya architects were highly skilled and created splendid independent city-states full of impressive towering pyramids, large palaces, decorative temples, ball courts and homes. The buildings would be laid around a central plaza in disorderly clusters and would follow a general style, albeit with some slight differences, from one region to the next.

Symbolism was important. El Castillo in the Mexican state of Yucatán, for instance, took the familiar Maya pyramid form of square stone terraces leading up towards a flat top on which a temple was built. Running along all four sides were 91 steps, which, in addition to the platform, added up to 365 – the number of days in a Maya Haab' year.

Such huge stairways and chambered buildings atop platforms were commonplace in Maya design. So too were exteriors faced with stucco, colourfully painted and adorned with detailed stone carvings, glyphs and statues honouring kings and the gods. There are more than 2,200 glyphs on every blocked step of the Hieroglyphic Stairway in Copán, dating back to 755 CE.

Most architecture used straight lines rather than curves, and buildings would typically be topped with a corbelled vault like an inverted staircase, bridged by a single capstone. Sometimes, they'd also reach for the skies: the four-storey Observation Tower at the palace-topped pyramid in Palenque is a good example – the building also being notable for its fine bas-relief carvings.

DESTRUCTION

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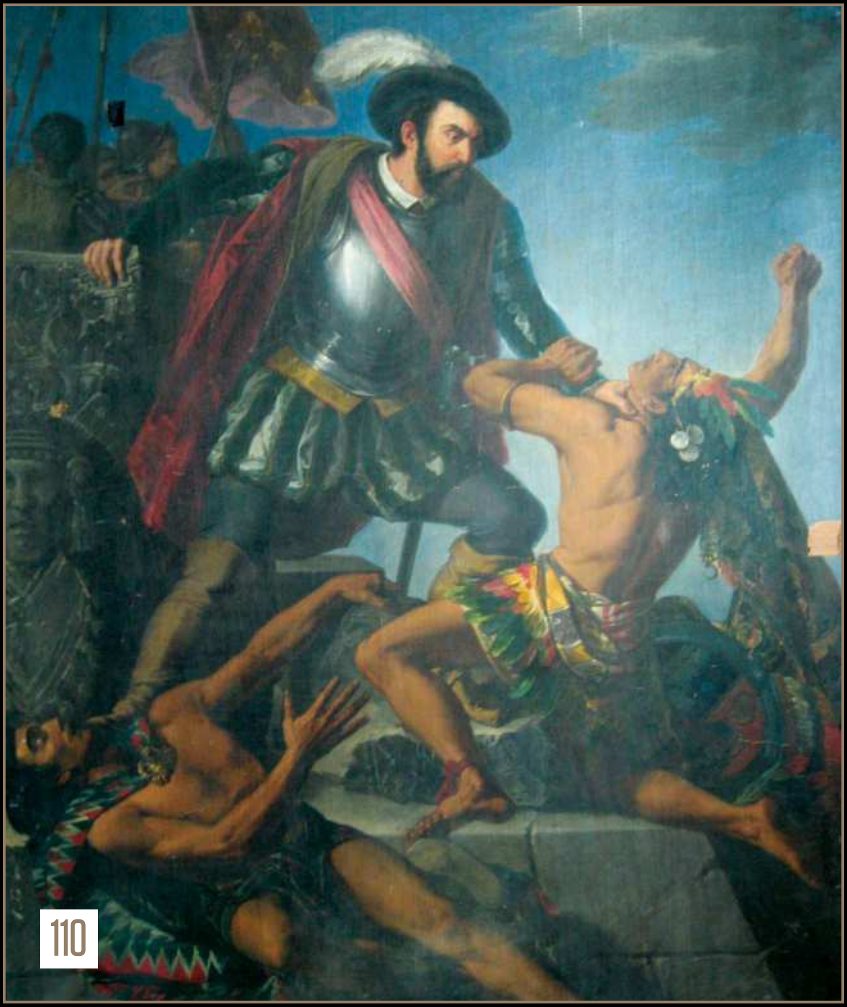

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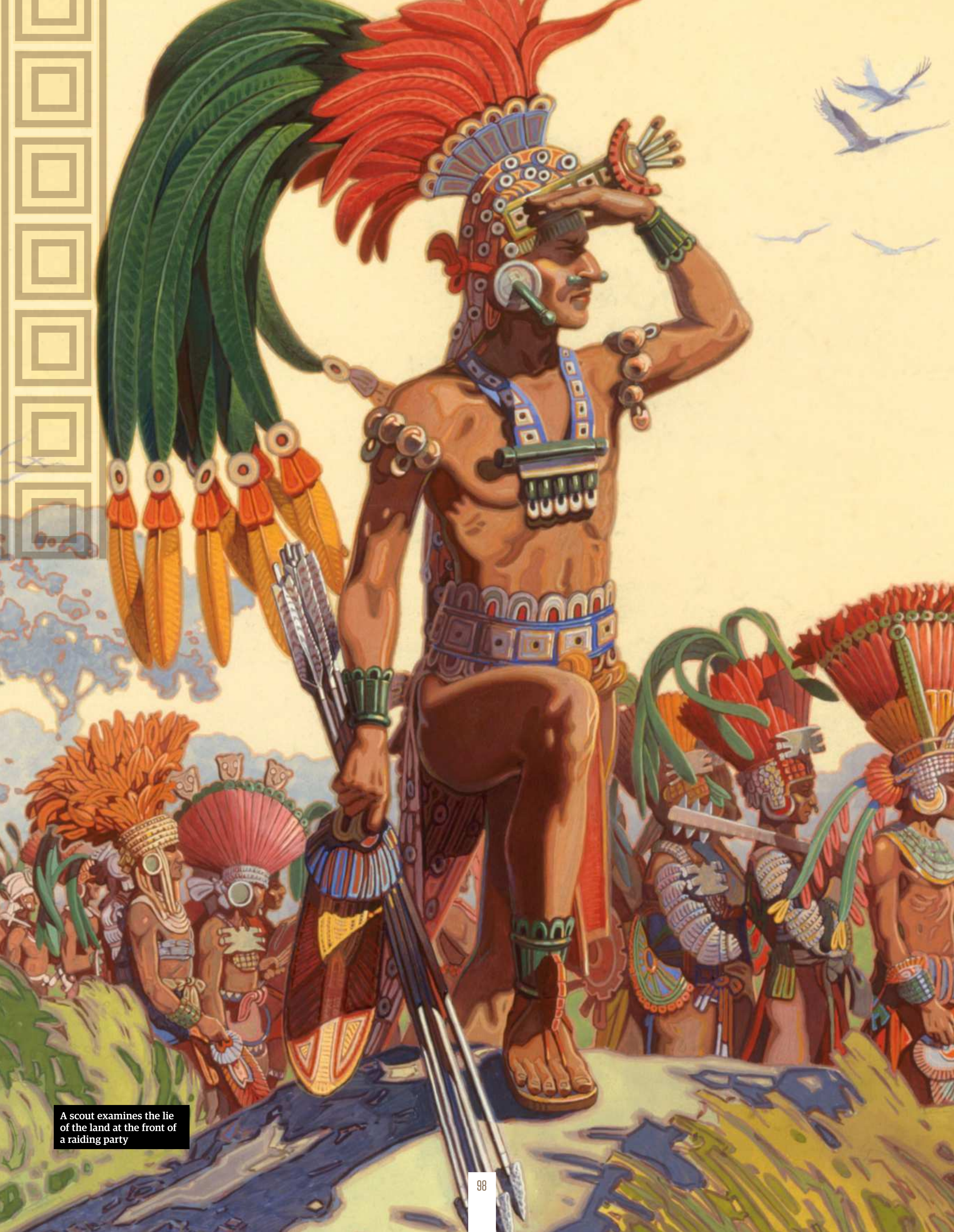


A scout examines the lie of the land at the front of a raiding party

DEATH THROES OF A DYNASTY

Once a hive of art, culture and mathematics, the violent city-states of the Yucatán Peninsula would pay the ultimate price for their bloodlust

WRITTEN BY CHARLES GINGER

Death. Be it decapitation, the removal of the heart or the relentless bite of arrows, the only promise made to a captured Maya leader was the ritualistic ending of his life. Once thought of as a curious and kindly people who carved out a surprisingly advanced civilisation within the jungles of what is today North and Central America, the Maya were indeed a fascinating and scientifically progressive race, but they were also killers. From the dawning of the Maya age to its bloody denouement, the city-states of this thriving land were entwined in almost perpetual warfare, conflict that for a time helped to establish an uneasy status quo but eventually led to the downfall and death of an entire people.

The ultimate Maya mystery is still exactly why they seem to have disappeared off the face of the Earth after centuries of domination, but perhaps the greater riddle is why hostility between the Maya cities began to escalate when it did. Why, after generations of raiding, slavery and war, carnage that had never succeeded in totally undermining the Maya way of life, did a sudden acceleration in violence finally condemn a hitherto

thriving society to the abyss? In order to attempt to fully understand the precipitous change in Maya life that would bathe the Postclassic period – which is dated from 900 CE to 1521 – in blood and tear down the walls and temples of countless cities it is necessary to journey back to the murkier roots of the class warfare that so occupied these intriguing people.

It is without doubt the case that internecine wars and raids plagued large parts of Maya territory from the moment they started coalescing into recognisable societies as far back as 1800 BCE in what is today Guatemala. However, some primary examples of the brutality that would ultimately unhinge the delicate balance between atrocities and agriculture can be found in the clashes between the two rival states of Calakmul and Tikal in the Yucatán Peninsula during the 6th and 7th centuries.

Beginning in 537 CE, the first war saw the prosperous region of Calakmul – which boasted an overall population of approximately 200,000 – unite with the city of Caracol to inflict devastating losses on the far larger city of Tikal (half a million people are thought to have called it home).

Hostilities finally drew to a close in 572, but, as was the way within Maya society, they would flare up once more in 650, this time for 45 years. And, clearly unperturbed by the prospect of lengthy wars, yet another conflagration would begin in 720 that ultimately led to the collapse of Calakmul, Dos Pilas and Aguateca, among other cities.

This elaborate incense burner was recovered from the ruins of Mayapán. Its ornate design highlights the skill of the city's craftsmen

According to Dr Linda Schele of the University of Texas, the motives behind these wars are unclear. "We don't know if the early Maya went to war mainly to acquire territory, take booty, control conquered groups for labour, take captives for sacrifice or a combination of these [reasons]."

However, what is beyond doubt in the view of Dr Arthur A Demarest of Vanderbilt University in Nashville, Tennessee, is that the Maya were "one of the most violent state-level societies in the New World, especially after 600 CE". This previously controversial view is supported by the presence of stone carvings and other artworks that depict bound captives being executed or sacrificed, a common practice among the power-hungry nobles of the Maya world, kings (a centralised state that governed all Mayas never emerged) who predicated their strength on the ritualistic killing of prisoners and the deployment of armies in savage battles.

Yet while these wars were no doubt horrific for those involved, they did give rise to technological advancements, particularly with regards to the construction of large defensive structures in and around cities. These walls and parapets were usually erected to protect the epicentres in which public buildings and the homes of the elites were situated. One of the most sinister developments was that of concentric walls, as the open space between them was designated as a 'killing zone' that any would-be invaders would have to navigate under a hail of spears and arrows.

Following another spate of bloodshed from 850 to 1000, the Maya civilisation was beginning to falter. Utterly reliant on the ability of its farmers to safely utilise the delicate ecosystems that surrounded their many cities, the Mayas' increasingly vicious outbursts were beginning to take their toll. Even so, the demise of established states such as Calakmul in turn enabled a new power to rise: Mayapán.

Said to have been founded in the wake of the collapse of Chichén Itzá by a ruler named Kukulcan

The Temple of Kukulcan and the observatory tower dominate the central plaza of Mayapán

in the late 1100s, Mayapán – which means 'flag of the Maya' – flourished into a prosperous capital, the largest of the Late Postclassic period. Ringed by a 9.1-kilometre-long wall that stood as high as 2.5 metres and measured 3.5-metres thick, the residential zone of the city was well protected, with 12 gates allowing the city's people (it's estimated that up to 17,000 lived within its walls) to safely leave and enter, gates that could be swiftly blocked in the event of an assault.

Further defensive enhancements were built in the form of parapets, internal walkways that would have enabled the city's defenders (a kind of civilian militia) to watch out for approaching threats and rain down death as required. In the event of an invasion force managing to breach these formidable obstacles, they then would have been met with labyrinthine streets that only those used to the city could ever have hoped to navigate successfully.

The impressive efforts of Mayapán's rulers – and the more hastily built attempts elsewhere – to shield the city against external threats are testament to the regularity and ferocity with which wars were fought in the Yucatán Peninsula.

A key objective of any raid was the capture of rival nobles, as depicted here in the 2006 film *Apocalypto*

While sieges were short-lived due to a number of reasons, including a lack of advanced siege engines and the fact that campaigns were restricted to spring, the construction of looming walls and easily defensible gates was prudent in a time of escalating militarisation, evidence of which has been unearthed within the ruins of Mayapán.

Two burial shaft temples situated in the centre of the city were found to have been filled with the bones of men, women and children sacrificed to the gods in a bid to win their favour or stave off natural disasters. Mass graves have also been revealed below the city. Bioarchaeological data has suggested that cranial trauma was a regular affliction during the Late Postclassic period, with the nature of the head injuries to males indicating open warfare as opposed to raids. Many of the wounds studied on the bones found within Mayapán point to the use of clubs embossed with small, sharp points, suggesting that the fighting was hand-to-hand and no quarter was given.

Additional evidence in the form of household tools supports the argument of a violent society. Just under 30 per cent of the artefacts found in homes inside Mayapán were either a projectile or a knife, all of which points to a well-prepared and well-armed populace.

It is tempting to assume that war was forced upon the Mayas of the Yucatán Peninsula because of external stressors such as food shortages, but studies have shown that despite the widespread carnage, the diets of the Mayas, in this case those dwelling in and around Mayapán, remained fairly stable. It seems that instead of basic imperatives always providing the driving force behind war, the destruction of rival states was a means and an end in itself.

Capturing nobles, enslaving their people and seizing their lands were an intrinsic part of Maya society, which is no surprise when considering the fact that each of the city-states was ruled by a king who would have been viewed by his subjects as a demigod. Such power inevitably led

THE MAYA MILITARY MACHINE

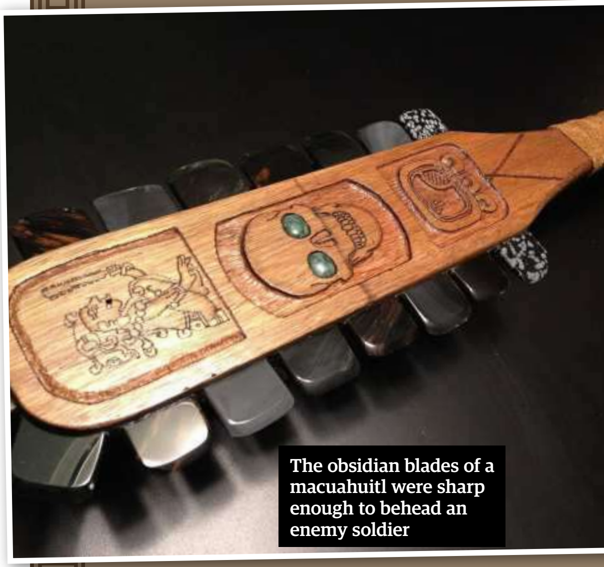
TO WAGE WAR, A MAYA RULER NEEDED ELITE TROOPS AND INGENIOUS WEAPONRY

As with most ancient civilisations, the right to rule was only afforded to those who could wrest power from the hands of their rivals and maintain their grip through strength of arms. The Maya lived – and often horrifically died – by the law of the jungle, but the wanton destruction of cities and the enslavement of fallen enemies was by no means a disorganised enterprise. To wage an effective campaign, Maya rulers were heavily reliant on elite warriors and mercenaries.

Military campaigns were restricted to the spring, and the need to supply armies or raiding parties often meant that forces never ventured further than a two-week march from home, with porters used to transport goods. Yet even though the fighting season was a brief one, soldiers still required a range of weaponry and other material in order to successfully execute their king's orders.

As in all other walks of life, the Maya applied their characteristic ingenuity when crafting weapons. Spears were the weapon of choice, with chert or flint tips for the average soldier and lethal obsidian ends for elite troops. A macuahuitl, a club ridged with razor-sharp edges, was also deployed in hand-to-hand fighting, during which a hide or wooden shield would have been used to protect warriors. Other weapons included blowguns, javelins, slings and a 'grenade' filled with wasps.

During battle a thick cotton shirt stuffed with rock salt formed a primitive type of body armour, and jade jewellery, animal pelts and elaborate headdresses were also a common battlefield sight.



The obsidian blades of a macuahuitl were sharp enough to behead an enemy soldier

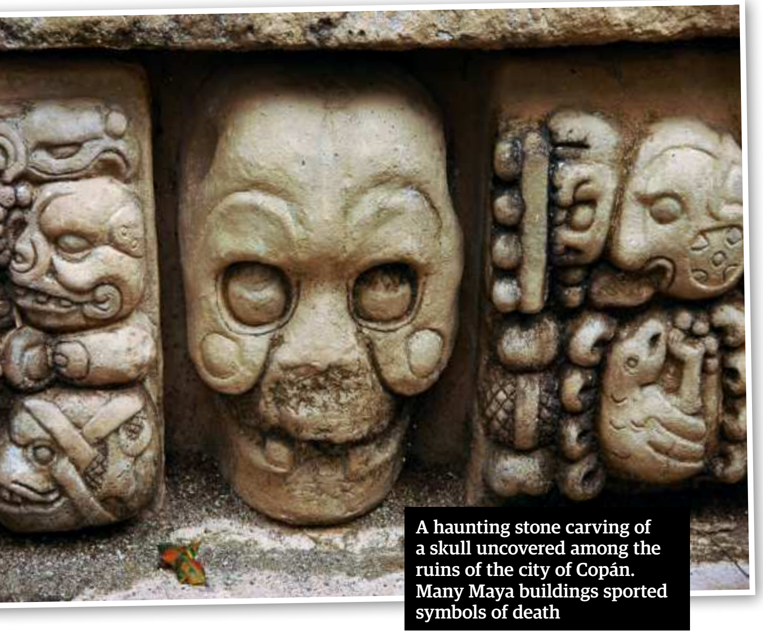
The remnants of ancient walls in the city of Ek' Balam are evidence of permanent, solid defences against invasion

to clashes between elites desperate to impose their supposedly divine will on others. The victors, thanks to the ingenuity and courage of their warriors, were able to do just that by ceremoniously executing their fallen counterparts. However, it would be incorrect to say that warfare was always a ritualistic duel between nobles. Sometimes it was born out of necessity.

An inevitable consequence of the battles waged across the Yucatán was the mass displacement of people, refugees who naturally sought shelter and sustenance in cities that had yet to be annihilated. This understandable shift in populations led to the unbalancing of agriculture, as more mouths to feed led to catastrophic farming practices as workers in the fields raced to find enough food. When they failed to do so, unrest soon followed.

Another cause for the raiding and pillaging so common in the region was the need to protect trade links between allied cities and vital economic resources. In the case of Mayapán these interests included cacao plantations, with cacao deemed a valuable commodity. As was the case for every other surviving city-state during the Postclassic period, if an ally collapsed so did business, meaning the long-term security of trade was well worth fighting for, especially the routes that Mayapán had managed to establish.

A wealth of archaeological evidence suggests that Mayapán traded far and wide in a range of goods including maize, salt, cocoa, cloth and even birds. The similarity between both goods and buildings in Zacpeten in the north of Guatemala indicate strong links between the two, and the same applies with the Utatlán of the highlands of Guatemala, who again displayed similar architectural preferences to the builders of Mayapán. It is even thought that contact was made with the Aztecs of Central Mexico: an Aztec deity was found etched into the walls of a Mayapán temple.



A haunting stone carving of a skull uncovered among the ruins of the city of Copán. Many Maya buildings sported symbols of death

A pillar of hope in a land adorned with the carcasses of doomed cities, Mayapán boasted a range of remarkable features. The Temple of Kukulkan, raised in honour of the serpent god of the same name, is a stunning pyramid structure lined with four staircases and furnished with nine terraces.

Also situated on the central plaza is the observatory. A circular stone tower built on top of a raised platform accessed via stairs, this structure would have been used to watch the skies. Keen astronomers, the Maya were particularly interested in the movements of the planets, believing them to be the gods journeying back and forth from Earth to the underworld.

On the same site as the observatory and Kukulkan's temple sits the Temple of Painted Niches, which contains five elaborate painted murals depicting temples and five niches that act as the entrances to each one.

These ruins, combined with those of the city's other cultural sites and elaborate defences, highlight the importance of Mayapán as an economic, political and religious hub in a time that witnessed ever more unrest and upheaval. And yet, for all its technological advancements, even Mayapán couldn't withstand the waves of war forever.

Mayapán is thought to have been built in the wake of a revolt known as the Hunac Ceel episode, and in a cruel twist of fate it was to be undone by a similar coup that would begin in 1441.

Maya cities were strictly hierarchical enterprises, with a king ruling over nobles, commoners, serfs and slaves, the latter of which were derived from foreign captives seized during successful raids. Despite their differences, the rulers of Maya cities were not foolish or powerful enough to take on all comers, and alliances between city-states were a regular occurrence. One such agreement between the Itza people, the chiefdom of Tutul-Xiu and the cities of Mayapán and Uxmal resulted in what became known as the League of Mayapán, a network of city-states established in 987 by Ah Mekat Tutul-Xiu.

At some unknown juncture it was decided that two families, the Cocom - known as the 'wood pigeons' - and the Xiu - a clan ironically labelled as 'overflowing virtue' - would rule Mayapán together. The rival factions managed to suppress their urges for a time and govern the city with brutal efficiency - the crimes of adultery and trespassing were punishable by a range of means including burning, disembowelment and shooting. However, their differences could only have been exacerbated by the famine, disease and general unrest that marked the final half-century of Mayapán's life. Mass graves, destroyed buildings and the fact that the Cocom family hired mercenaries from the Kuchkabal (state) of Canul in the north of Yucatán all testify to the chaotic nature of life in and around Mayapán in the late 14th and early 15th centuries.

Whether purely out of a desire to dominate or maybe due to the environmental pressures being exerted on the city, a group of Xiu nobles hatched a plan in 1441 to eliminate the Cocoms. Seemingly unaware of the plot against them, all but one of the Cocoms were duly cut down, the surviving family member fortunate enough to have been in Honduras at the time of the killings.

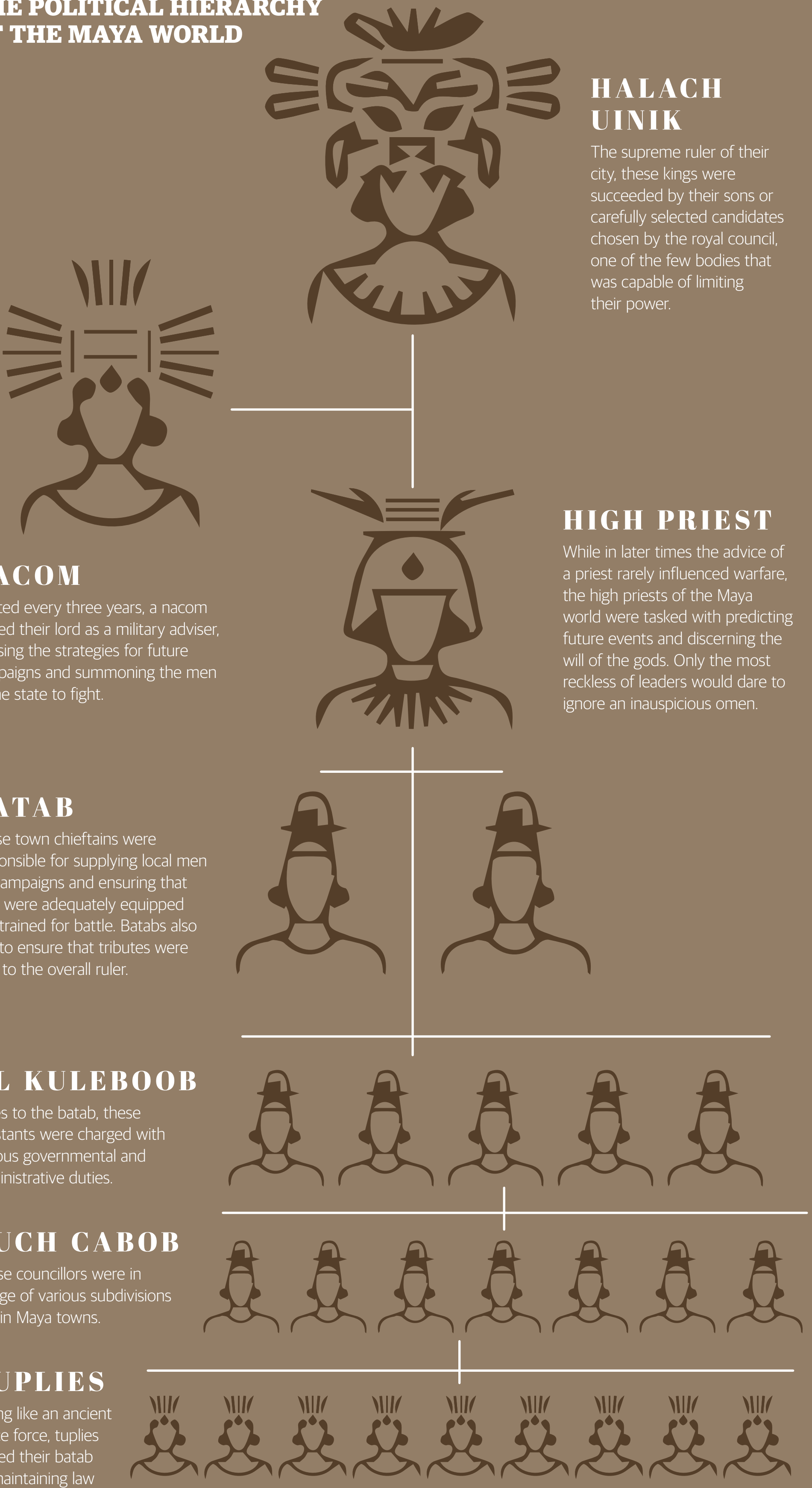
The sudden massacre of this powerful family proved too tempting an opportunity for the rest of the League, and a civil war ensued that engulfed the peninsula. Some accounts claim that the Xiu mustered a force that succeeded in laying waste to the very walls of Mayapán.

Whatever the real cause of this conflict, its result is not in doubt. By 1461 the League of Mayapán had collapsed in on itself, its rebellious states splintering off into 17 separate Kuchkabals. Mayapán, a once great and wealthy city, was abandoned to the jungle that surrounded it, its people either dead or fleeing in search of a new home.

Instead of snatching ultimate power, the Xiu and the Cocom tribes were instead forced to withdraw into the dense forests of Yucatán, where they would each rule a constellation of towns until a threat far more menacing than either of them arrived from across the ocean: the Spanish.

POSTCLASSIC POLITICS

THE POLITICAL HIERARCHY OF THE MAYA WORLD



HALACH UINIK

The supreme ruler of their city, these kings were succeeded by their sons or carefully selected candidates chosen by the royal council, one of the few bodies that was capable of limiting their power.

NACOM

Elected every three years, a nacom served their lord as a military adviser, devising the strategies for future campaigns and summoning the men of the state to fight.

HIGH PRIEST

While in later times the advice of a priest rarely influenced warfare, the high priests of the Maya world were tasked with predicting future events and discerning the will of the gods. Only the most reckless of leaders would dare to ignore an inauspicious omen.

BATAB

These town chieftains were responsible for supplying local men for campaigns and ensuring that they were adequately equipped and trained for battle. Batabs also had to ensure that tributes were paid to the overall ruler.

AL KULEBOOB

Aides to the batab, these assistants were charged with various governmental and administrative duties.

CUCH CABOB

These councillors were in charge of various subdivisions within Maya towns.

TUPLIES

Acting like an ancient police force, tuplies served their batab by maintaining law and order.

MAN OF WAR

The strange life of the Spaniard who fought for the Maya

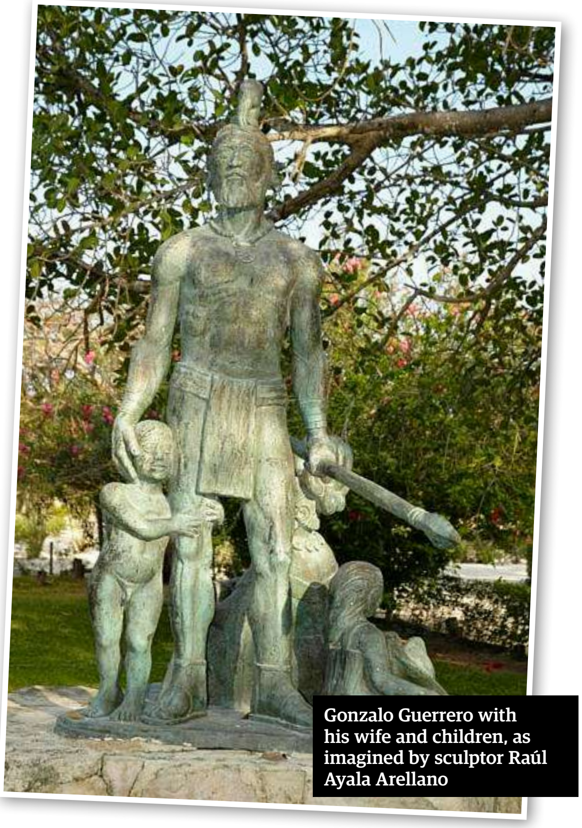
WRITTEN BY EDOARDO ALBERT

There's a statue near the beach in Akumal, 80 kilometres down the coast from the tourist frenzy of Cancún. It shows a heavily muscled man, bearded and with his hair tied up in a top knot, carrying a spear in his left hand but with his right hand curved protectively around the head of the small boy who is beside him. The man stands protecting the woman, sitting behind him suckling a baby while a third child sits beside them, playing with an abandoned helmet. The helmet is a morion, popularly associated with the Spanish conquistadors in the Americas.

The statue makes concrete the story and the paradox of the man who inspired it. He was named Gonzalo, a Spaniard shipwrecked on the Yucatán Peninsula of Mexico who was captured by the Maya then assimilated into their culture. He learnt the language, took a wife from the Maya people and fathered the first three mestizo (mixed Spanish and Amerindian) children in the Americas, later taking up arms against the Spanish, his erstwhile compatriots, in defence of his new land. That, in essence, is the legend of Gonzalo Guerrero. But the discarded helmet of the conquistador hints at the difficulties underlying the story. For while the morion has become the iconic helmet of the conquistadors, it was in fact never worn by the soldiers of Cortés or Pizarro, only coming to South America a generation later.

How much of the story of Gonzalo is actually true is impossible to say for certain. The man himself left no historical record. His existence is attested personally only by one other Spaniard – the Maya left no record of having a Spaniard living among them, although they would have been busy with other things at the time, such as attempting to fight off the invaders. The reports of Gonzalo by later chroniclers are exactly that – later. Indeed, some historians have gone so far as to say that the man himself did not exist but became a useful explanation for why it took the Spanish so long to conquer the Maya – over 20 years – when Cortés had done away with the Aztec Empire in just two and a half years. Hence the surname, Guerrero, handed to him by the chroniclers, which translates to Gonzalo 'the Warrior'. But truth, amid the chaos of clashing cultures, is likely to be stranger than even the story of Gonzalo, and that is strange enough to be true.

The chroniclers clash over his place of birth but they do at least agree that Gonzalo came from Andalucia in southern Spain, from Palos or



Gonzalo Guerrero with his wife and children, as imagined by sculptor Raúl Ayala Arellano a neighbouring town. But the key aspect of this birth is geography: the Atlantic-facing coast of Spain. The sailors who discovered the New World and who found the sailing route around the Cape of Good Hope into the Indian Ocean all set off from the ports that ranged up the Atlantic coast of Spain and Portugal. They knew well the wild surge of the great ocean. It was from Palos itself, at dawn on 3 August 1492, that a flotilla of three ships set sail, hoping to find the westward route to the Indies. What Christopher Columbus found was a new continent, entirely unsuspected by Europeans (and most of the rest of the world). The news created a sensation. Columbus' *Letter on His First Voyage* went through 19 editions between 1493 and 1500. The world had suddenly grown broader, wider. Imaginations soared at new vistas and, as a counterpoint, sank into a gold lust stirred by Columbus' calculated mentions of the treasures of this new world.

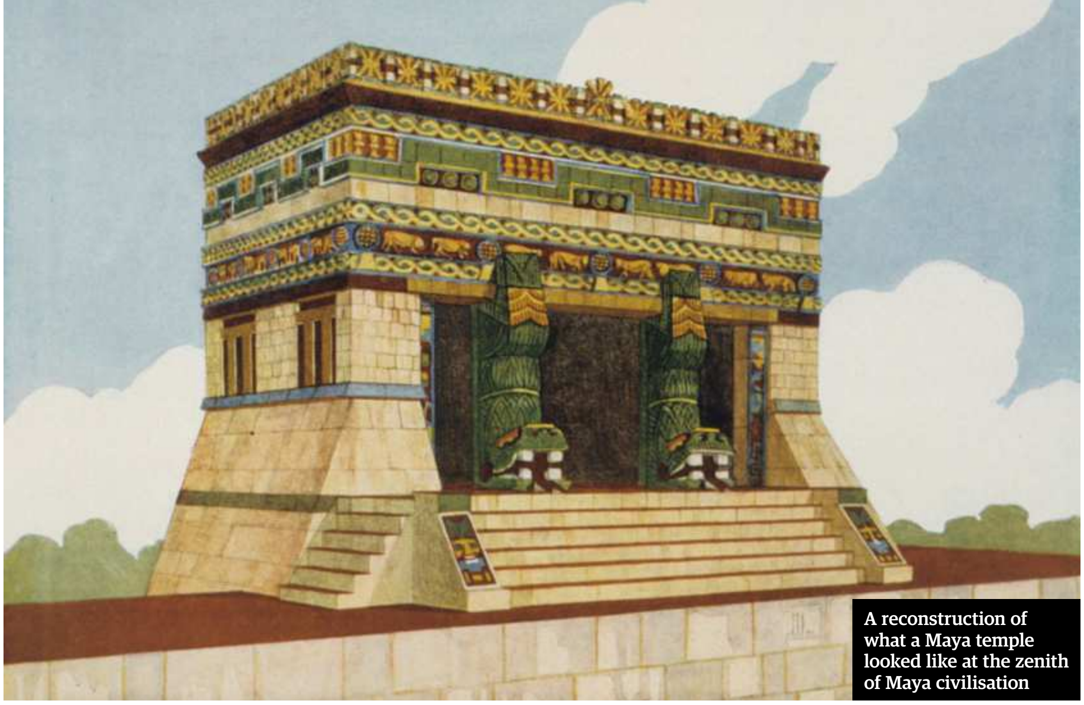
But along with gold, there were stories: stories of chivalry and adventure and heroism and exploration, recounting the tales of legendary figures such as El Cid or completely made-up characters like Amadis, the Knight of the Green Sword. Amadis, hero of the immensely popular romance *Amadis de Gaula*, was the example of the Christian knight: courteous, a defender of women and children, but a warrior without peer. These romances, later parodied by Cervantes in *Don Quixote*, formed the imaginations of the conquistadors. Gonzalo would have grown up listening to these stories: they would have formed his imagination and would have helped inspire him to take passage on one of the caravels setting off from Palos to brave the wide ocean. Between 1506 and 1518 some 200 ships sailed from the Atlantic ports of Andalucia for the New World. The men who crewed them, fired by dreams of adventure and chivalry and wealth, included a young Gustavo.

A modern interpretation of what a Maya warrior might have looked like

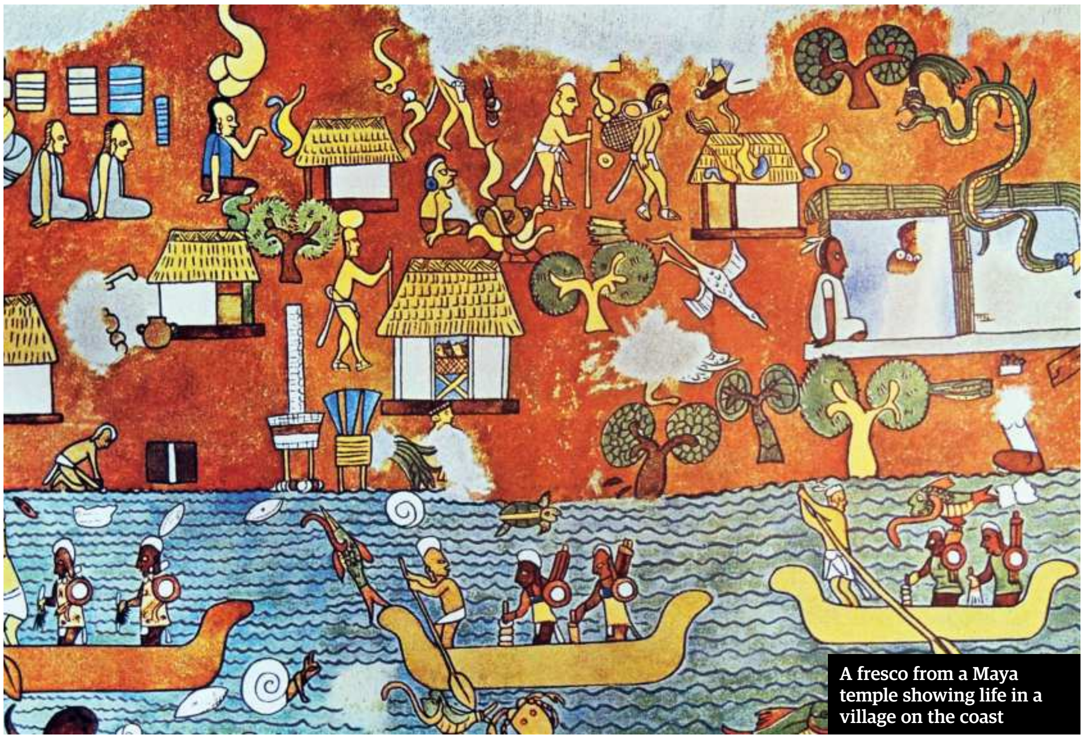
As Gustavo had arrived in Darién on the mainland of America by 1510, it's likely that he sailed with the expedition that left Sanlúcar in September 1509. Passage was 11 ducats: a year's wages. Assuming Gustavo had nautical skills, he could have worked his passage. Darién was the first attempt to establish a colony on the mainland – and it failed entirely. Set amid jungle with a climate and insect life that was noxious to Europeans, the colony was abandoned, the settlers moving to a more promising site gifted the same name, from which an expedition led by Vasco Núñez de Balboa set off across the Panama isthmus to become the first Europeans to set eyes upon the Pacific and, in Keats' poem, "look'd at each other with a wild surmise – silent, upon a peak in Darien". It was from Darién that a ship, setting out for Hispaniola (the Caribbean island that today comprises Haiti and the Dominican Republic), departed on 13 January 1512. Aboard it was Gustavo and a Franciscan friar named Jerónimo de Aguilar. But the ship never arrived at its destination, and it was seven years before any news of the fate of its passengers and crew reached the Spanish.

The news was brought to Hernán Cortés, the conqueror of the Aztec Empire, by the friar Aguilar. Moored on the mainland before embarking on his expedition, Cortés heard rumours of bearded men – Spaniards – living in the interior. He sent native runners into the jungle, urging these Spaniards to come and join him within six days but, with none appearing, Cortés set off. However, a series of events meant that his actual departure was delayed until, on the day of him finally leaving, Cortés saw a canoe approaching with four natives paddling fast towards them. Sending men to intercept the canoe, one of the four natives stepped forward and asked, "Gentlemen, are you Christians?". When they answered that they were Spaniards, the native fell to his knees, hands raised in prayer and offering up his thanks.

It was Jerónimo de Aguilar. Far from being bearded, he appeared to Cortés a native, clad only in a loin cloth and a cloak. In rusty Spanish, Aguilar told the tragic story of the lost ship. Run aground on a reef, 20 survivors had taken to a boat but, without sails, food or water, the castaways were soon dying. They drifted for two weeks until they were finally cast ashore on the Yucatán Peninsula. But land brought new hazards: attacks from the natives. The emaciated survivors were captured and four quickly sacrificed and eaten. The seven left alive were fed well but, suspecting they were being fattened for a future feast, they escaped and fled… into the hands of another tribe. However, the chief of the tribe, Ah-kin Cuz, offered the Spaniards their



A reconstruction of what a Maya temple looked like at the zenith of Maya civilisation



A fresco from a Maya temple showing life in a village on the coast

lives so long as they became his slaves. Under the circumstances it was a good offer. But slavery is slavery: it's not known for good labour conditions. One by one the remaining Spaniards died, until only Aguilar and one other man, whom he knew as Gonzalo, remained alive. Aguilar became a trusted slave to his master while Gonzalo was sold on to another native chief.

When the letter from Cortés reached Aguilar, the friar asked his master for permission to travel to where Gonzalo was living, where he read the Spaniard the letter. But to the friar's surprise, Gonzalo refused the offer of return. Instead, Gonzalo told Aguilar that he had married - Aguilar himself had remained true to his vow of chastity - and fathered three children. What's more, Gonzalo had risen in Maya society, being now counted a chief among them and a war leader. Gonzalo went so far as to point to the tattoos on his face and the rings dangling from his ears and nose: how could someone who looked like this be accepted back as a Spaniard? The chroniclers say that Aguilar did his best to persuade Gonzalo to return with him but Gonzalo was adamant: his place was with the Maya now.

This choice of Gonzalo's was, so far as we know, unique. There are no other recorded instances of a Spaniard abandoning his culture, religion and language and adopting those of the native peoples the Spanish were busy conquering. Aguilar said that Gonzalo had done more than just go native: he was leading the Maya of his area in resisting the Spanish advance. For Cortés, Gonzalo's presence among the Maya was a nuisance but not a threat: he was bound for the heart of the Aztec Empire and about to embark on one of the most extraordinary conquests in history. But for those Spaniards, struggling through jungle, ambushes

FOOD FROM A NEW WORLD

THE AMERICAS TRANSFORMED THE EATING HABITS OF THE REST OF THE WORLD

The foods that Gonzalo and Zazil Há fed their children on were totally different from the normal fare of Europeans. Indeed, they were so different that, in the first few decades, Spanish colonisers struggled mightily to grow European staples in their new South American home - generally with little success.

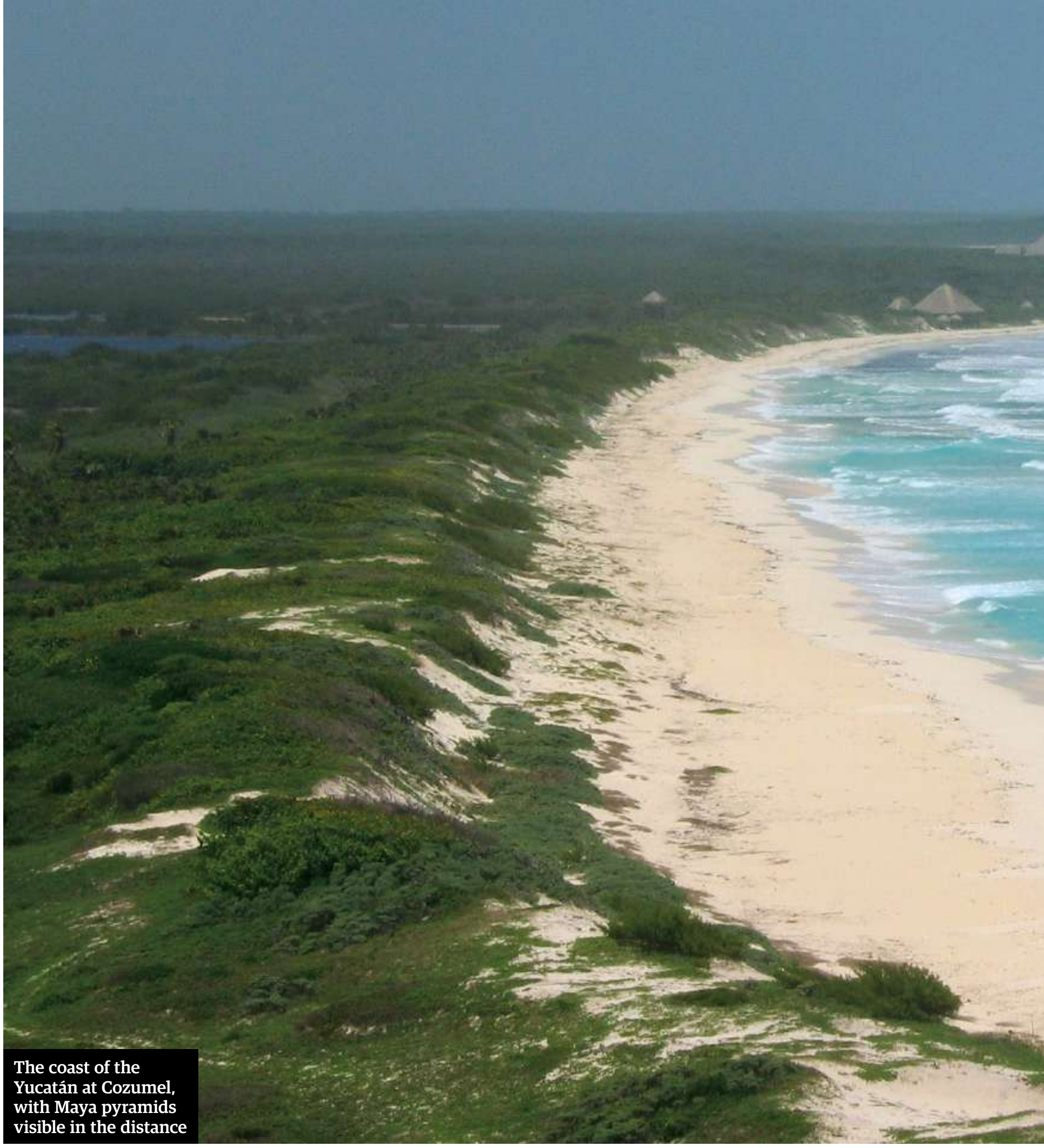
It was only the threat of starvation, following the failure of harvest, that drove the Spanish settlers to try the foods that the natives ate. In doing so they revolutionised the diet of the rest of the world. A partial list of the foods that came from the Americas and were unknown elsewhere before the 16th century includes tomatoes, potatoes, pumpkins, sweet and hot peppers, courgette, cassava, avocado, papaya, maize, sweet potatoes and chocolate. Their ubiquity in our diet today tells of a small part of the changes wrought by the discovery of the New World.

Some of the foods from the Americas that transformed the eating habits of the rest of the world and disease on the Yucatán Peninsula in the years to come, there was an explanation for the difficulties and obstacles they encountered in the tattooed face of a turncoat Spaniard. Gonzalo was turning from man into bogeyman.

But why did Gonzalo refuse the opportunity to return to his compatriots? The tattoos and earrings set him apart, obviously, and his wife and children were incentives to remain. But simple ambition may have played a part. Among the Spanish Gonzalo was low born, but among the Maya Gonzalo had become a man of moment: a war captain and chieftain. Indeed, his status had climbed to such an extent that his wife, Zazil Há, was the daughter of the chief. The children of their union became the first mestizos of Mexico – and today mestizos make up between 50 and 90 per cent of the population. So Gonzalo's children were the first of millions.

As for Jerónimo de Aguilar, he had managed to save his breviary (the prayer book used by monks and friars for daily prayer) and this had been the anchor that kept him secure in his old identity. But when Aguilar sailed with Cortés to play a part in the conquest of the Aztec Empire, his leaving also brought an end to direct historical testimony as to the life of Gonzalo. With his departure we enter the realms of historical speculation, apart, perhaps, from the story's ending.

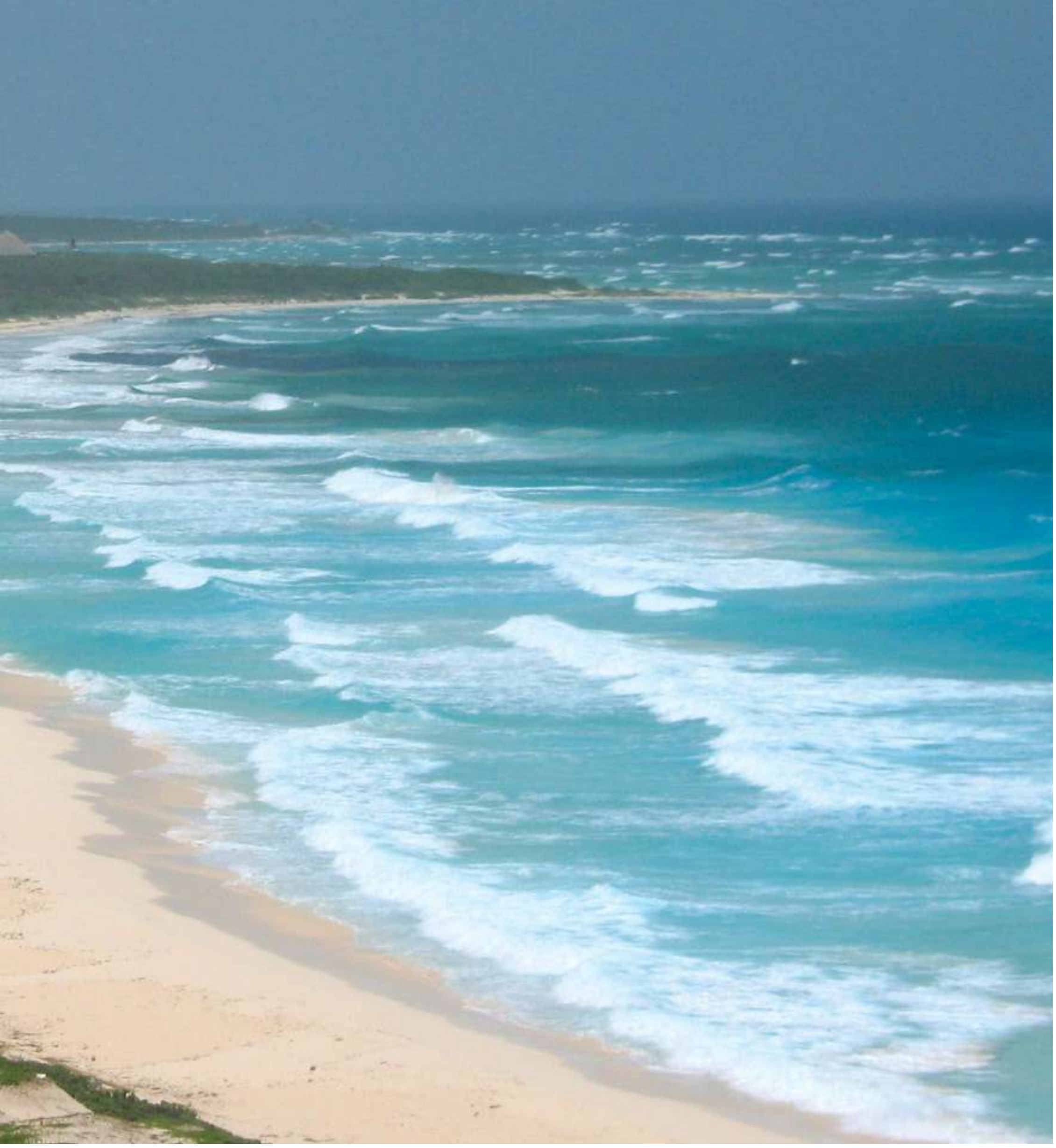
The unimaginable riches of the Aztec Empire seized Spanish attention for the next decade. Gonzalo, the only Spaniard in the Yucatán for most of that time, would have had the opportunity to raise his children and, presumably, rise even higher in Maya society. Then, in December 1526, Francisco de Montejo, one of Cortés' captains, was granted a charter to conquer and colonise the Yucatán. But Montejo was to find the conquest a far harder task than Cortés' defeat of the Aztec Empire. For a start, the Maya civilisation, which had once rivalled that of the Aztecs in sophistication and population, had mysteriously declined centuries earlier, with its cities abandoned to the jungles and the people returning to a rural existence. There was therefore no single ruler who could be defeated but rather a large number of independent chiefs leading rival tribes: killing one chief and subduing his tribe still left all the others undefeated. Added to that were formidable Maya warriors who had no doubt that the Spaniards were men like they were – and could be killed like other men.


The coast of the Yucatán at Cozumel, with Maya pyramids visible in the distance

Montejo prepared his expedition well: four ships and 400 men, 50 cavalry, cannons and other weapons. They sailed in June 1527, and Montejo established a settlement on the coast of the Yucatán at the village of Xelha. But disease ravaged the settlers, leaving Montejo with only 100 men. Looking for a better site, Montejo learned from some natives that a Spaniard lived among the Maya: Gonzalo. In response, Montejo dispatched a letter to Gonzalo, offering him a high place among his men if he would return to his side and aid him. The response, according to the chroniclers, was written in charcoal on the back of Montejo's letter. The language, as relayed in the chronicles, is suspiciously flowery for a low-born Spaniard who had not spoken his native language for 12 years, but the substance was clear: Gonzalo would not be returning to the Spanish.

Indeed, the Spanish and their chroniclers came to believe that Gonzalo was playing a leading role in directing the Maya resistance. Where before native forces had shown little more tactical acumen than frontal charges, the Maya adopted deception, disguise and ambush. In one particularly sly ploy, an expedition dispatched by Montejo returned to base because they had been told, by apparently trustworthy natives, that Montejo had died, so they had to return to base. Among other fresh tactics, the Maya dug disguised pits to disable the Spanish horses. In response to these stratagems, and the loss of men to war and disease, Montejo had little choice but to withdraw and resupply. But his second attempt to conquer the Yucatán, begun in 1531, ended even more ignominiously, with the Spanish paddling for their lives in commandeered native canoes. By 1535, apart from some wandering Franciscan friars, Gonzalo was again the only

A ceramic figure of a Maya warrior dating from the heyday of Maya civilisation, between 600 and 900 CE



Spaniard in the Yucatán. When they returned, in 1543, waging a campaign of such spectacular brutality that it provoked the Franciscans to write to the Spanish court protesting the actions, there was little sign of the clever tactics that had frustrated the Spanish before. What had happened to Gonzalo in the meantime?

According to the testimony of Pedro de Alvarado, what had happened to Gonzalo was a bullet from an arquebus. But not in Yucatán. Alvarado was given the task of conquering what is today Honduras, and in the aftermath of the decisive battle the Spanish discovered among the dead a tattooed Spaniard. Alvarado identified the dead Spaniard as Gonzalo Aroca. However, Honduras is a long way from the Yucatán, across the Gulf of Honduras. In his letter, Alvarado said that, following the defeat of Montejo's attempt to conquer the Yucatán, the renegade Spaniard had led a fleet of 50 Maya canoes south to Honduras to aid the Indians there, only to meet his end in battle with Alvarado's men. Most historians accept that the body the Spanish found among the dead was indeed Gonzalo Guerrero. If so, Gonzalo died in June 1536, making him about 50. There is no record of the fate of his wife and children. However, the Maya of the Yucatán fought long and hard against Spanish domination and the descendants of Gonzalo, the Spaniard who had found a new people across the ocean, may well have been among those who carried on the long struggle.

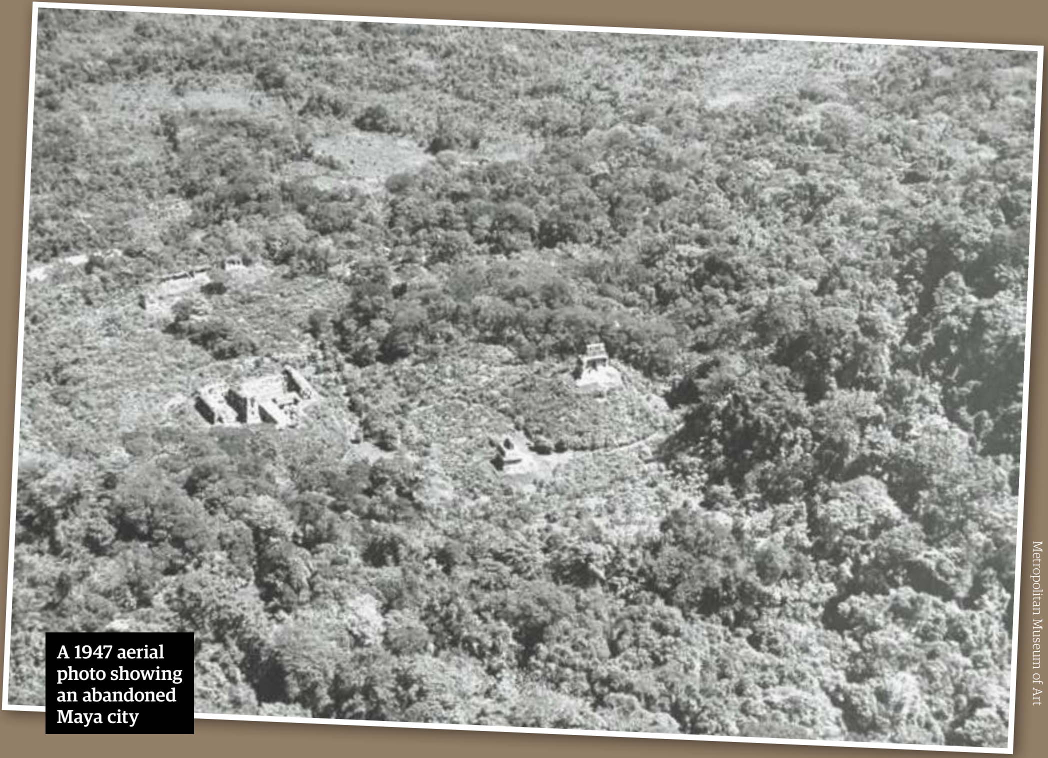
FALL OF AN EMPIRE

WHAT HAPPENED TO THE MAYA CIVILISATION REMAINS A MYSTERY

The Maya world that Gonzalo found himself unwittingly entering in the early decades of the 16th century was very different from its heyday. The great stepped pyramids, and the cities that provided the labour to build them, had been abandoned centuries before, with the last recorded king, Jade Sky, dated to the start of the 9th century.

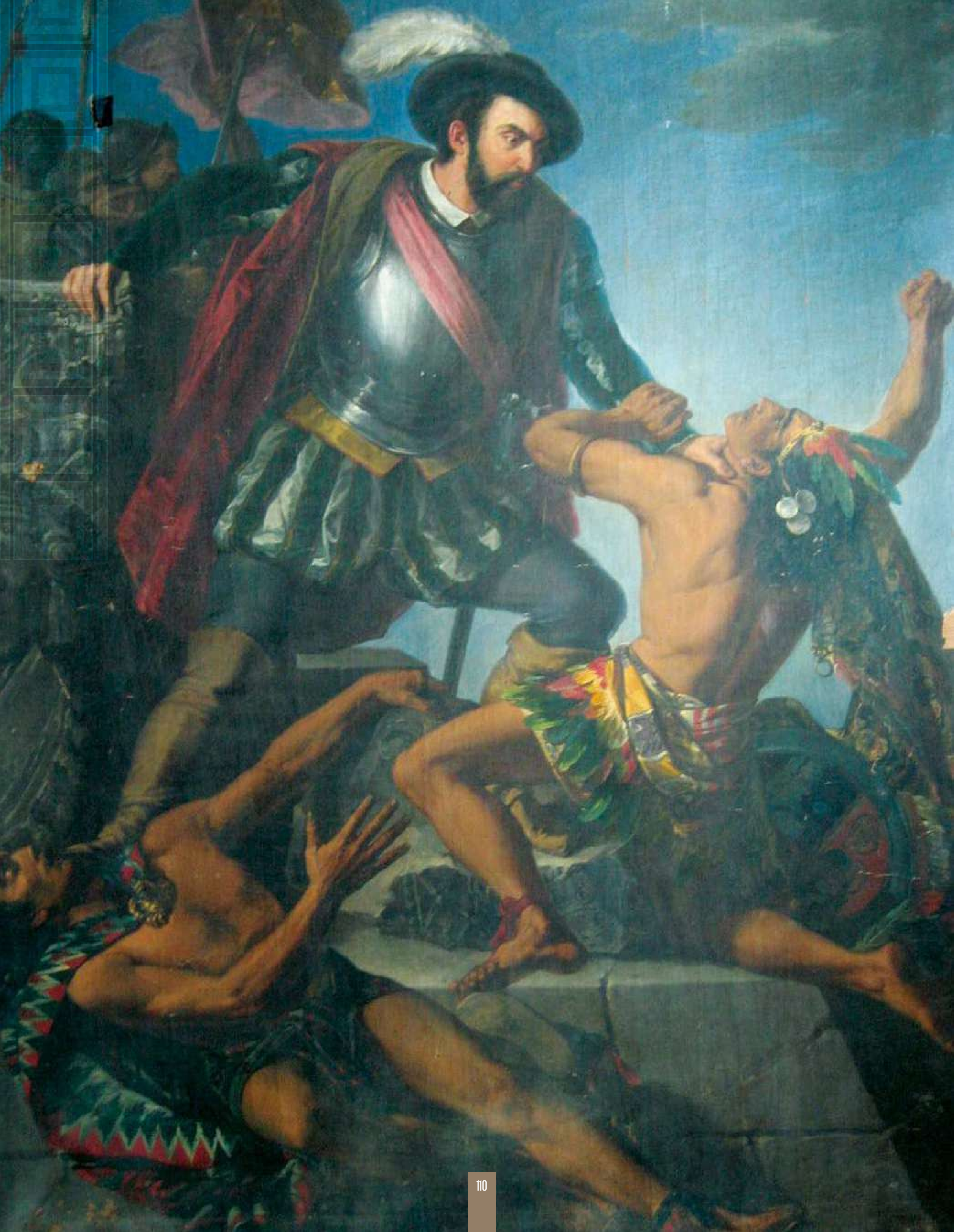
The collapse of the Maya civilisation did not take place overnight but rather rolled north from Central America to the Yucatán over a century or two. There are many competing theories to explain the demise, including drought, environmental degradation, disease, climate change and social disintegration brought about by a loss of faith in the kings, but there is no consensus as to what actually brought about the collapse.

Whatever the cause, the complex, highly formalised structure of Maya civilisation ended. The cities were abandoned. The temples left to the encroaching jungle. The people themselves returned to the wilds, leaving the relics of their once-mighty civilisation to the jacarandas and the oleanders.



A 1947 aerial photo showing an abandoned Maya city

Metropolitan Museum of Art



THE SPANISH ARRIVE

The Spanish arrival in the Americas turned the balance of power in the continent on its head and transformed traditional ways of life forever

WRITTEN BY JAMES PRICE

Off the coast of an island in the Gulf of Honduras, a large canoe, carved from the trunk of a single tree, was being propelled by 25 paddlers. A palm-leaf awning sheltered women and children inside, while the rest of the canoe was filled with merchandise. The people in the canoe soon saw a large wooden ship move towards them, pushed forth by the wind as it caught and snapped at the broad canvas sails above the hull. Driven by intrigue and the opportunity to trade, the canoe was steered towards the ship. From high above, pale, bearded faces stared down, and the bearded men soon moved to board the canoe, curious about its contents. The men seized many of the possessions and even forcibly took the canoe's captain back aboard their ship before the canoe could get away.

This was the first known meeting between the Maya and the Spanish, and it occurred during Christopher Columbus' fourth journey to the Americas. Columbus' first voyage arrived in the Caribbean in 1492, and his subsequent explorations uncovered more and more of a vast continent that the Europeans had until recently never realised existed, putting two very different worlds on a collision course that would change the Maya way of life forever. In many ways this first contact between the Maya and Spanish explained much of the Spanish attitude: curiosity, above all for valuables, and a clear disregard for anyone in between them and that wealth.

EARLY CONTACT AND CONFLICT

Following Columbus' discoveries and accounts of what he found there was a rush of individuals driven by wild tales of wealth lying in wait across the ocean. However, what many found after rough and uncomfortable journeys across vast tracts of ocean was poverty and disease.

From early bases in Cuba, Hispaniola and the other colonised islands, the Spanish formed expeditions that would go on to explore the coast of Central and South America, above all in search of gold and silver. This inevitably brought them to the Yucatán coast and in closer and closer contact with the Maya living there.

An expedition led by Francisco Hernández de Córdoba in 1517 brought the two cultures into conflict. Córdoba had been dispatched with a fleet to explore the coastline, which at that time was still almost entirely unknown, despite the expeditions of Columbus. Bernal Díaz del Castillo, an active conquistador who later chronicled much of the conquest of New Spain, was among the crew. He delighted that "we came in sight of land on the twenty-first day after our departure from Cuba, which filled every heart with joy and thanks towards God. This country had never been discovered before, nor had anyone ever heard of it".

Encountering several canoes off the coast, the Spanish were invited ashore. But the seemingly friendly welcome was a ruse, as the newcomers were ambushed as they climbed from their boats. The Spanish beat the Maya back and set off once more. Though only a small skirmish compared to what was to come, this episode set the tone of mutual distrust that would poison relations between the Maya and the Spanish.

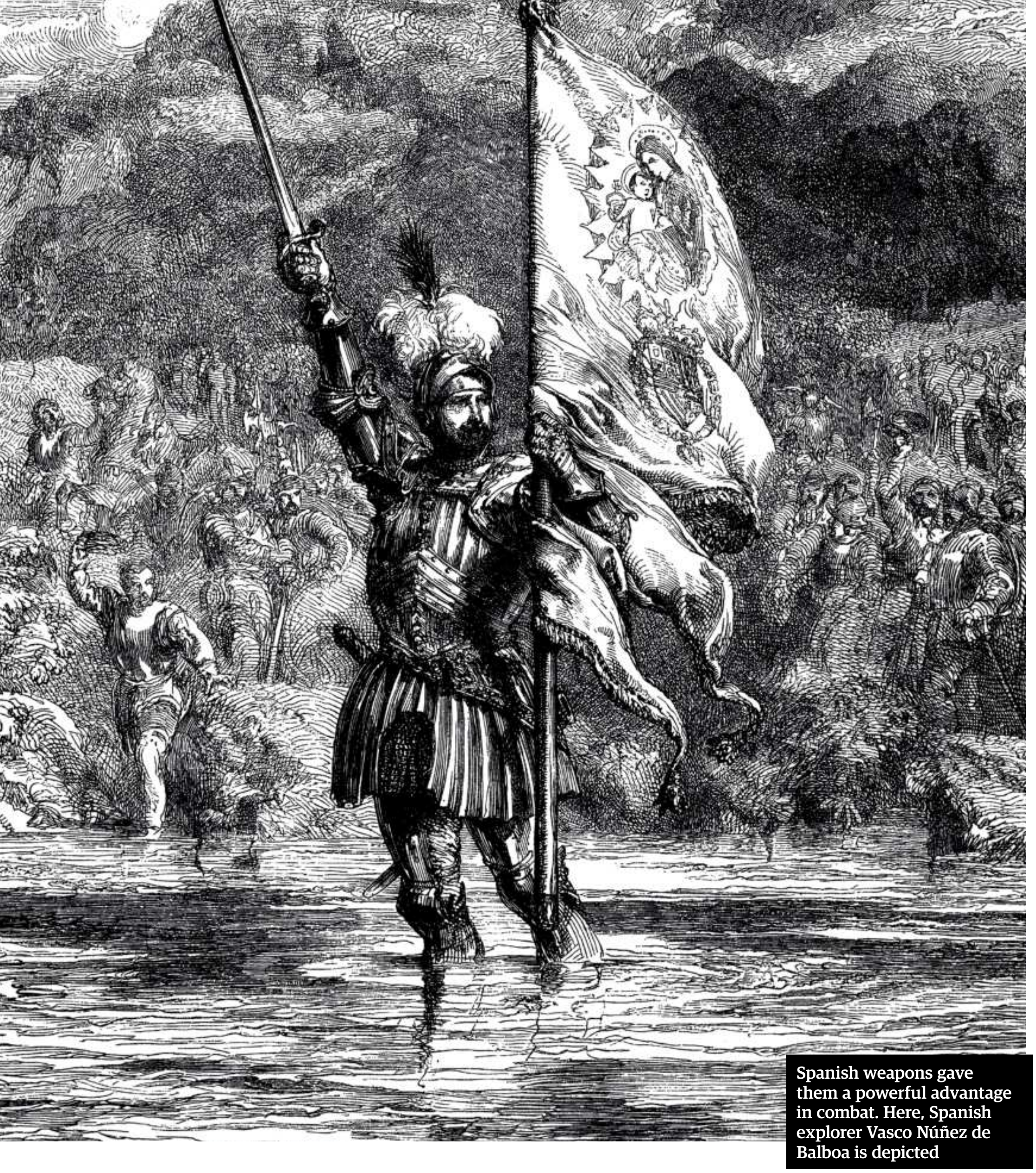
Cordoba's expedition ran into further trouble a few weeks later. Once again ashore, they were surrounded and attacked by a large Maya army. Here, the Maya had the advantage. According to Díaz, they were a dangerous opponent: they wore "a kind of cuirass made of cotton, and [were] armed with lances, shields, bows, and slings; with each a tuft of feathers stuck on his head. As soon as they had let fly their arrows, they rushed forward and attacked us man to man, setting furiously to with their lances, which they held in both hands." Over 50 Spanish were killed, the survivors forced to flee to their boats and limp back to Cuba.

A second expedition in 1518 under the command of Juan de Grijalva also came into contact with various Maya cities along the coast. It was clear that the Spanish were not going to leave the shores alone anytime soon.

WHO WERE THE CONQUISTADORS?

In 1519 another Spanish expedition sailed from Cuba, but this one would change life in the Americas forever. Hernán Cortés set out with 11 ships, around 600 men and 16 horses, as well as natives brought from the Caribbean and an unknown number of African slaves and freedmen. This was a powerful, well-armed force. Stopping at Cozumel on the Yucatán coast and then on the Tabascan coast, Cortés revealed the full power of a modern European army.

The Spanish adventurers in the New World, often known as 'conquistadors', brought technology that no one on the American continent had encountered before. The Spanish boasted fine steel weapons, along with steel armour and strong shields, known as bucklers. While the steel armour was less important - often the Spanish chose to use the quilted cotton armour of the natives instead due to its effectiveness and lighter nature - the steel swords were tough and hard to blunt and gave the Spanish a significant advantage in combat. The Spanish also came with powerful



Spanish weapons gave them a powerful advantage in combat. Here, Spanish explorer Vasco Núñez de Balboa is depicted

“THE SPANISH CONQUISTADORS WERE ACCOMPANIED BY DOZENS IF NOT HUNDREDS OF AFRICAN SLAVES AND FREEDMEN”

crossbows, arquebuses, which were an early type of musket, cannons and, perhaps most imposingly, horses. Warhorses were large and aggressive, moved quickly and gave the rider a huge advantage when fighting, and the psychological impact of the noise and sight of these beasts on the Maya was huge.

But the men who fought in this army were not soldiers directly representing the Spanish crown. As noted by historian John Pemberton, they were mercenaries; veterans of European wars for Spain against France and the Moors, and the “cessation in hostilities [in Europe] was long enough for trained Spanish soldiers to start looking for fresh adventures”. The New World was a place they could use their martial skill to accrue great wealth – if they survived.

The Spanish had a wholly different way of fighting – they were not interested in capturing prisoners, did not stop when an enemy was routed or wait for the appropriate moment to attack (unlike the Aztecs). The Spanish fought to cause as much destruction and death as they could. Their horses, meanwhile, gave them a huge tactical advantage.

As private venturers rather than soldiers, the Spanish called themselves ‘companies’ and referred to each other as ‘compañeros’ or even partners: they were, according to Matthew Restall and Florine Asselbergs, “in a sense partners in a business venture”. They were expected to arm themselves, and decisions often had to be discussed and approved by the company. But what motivated the conquistadors to cross a perilous ocean to fight people they had never heard of?

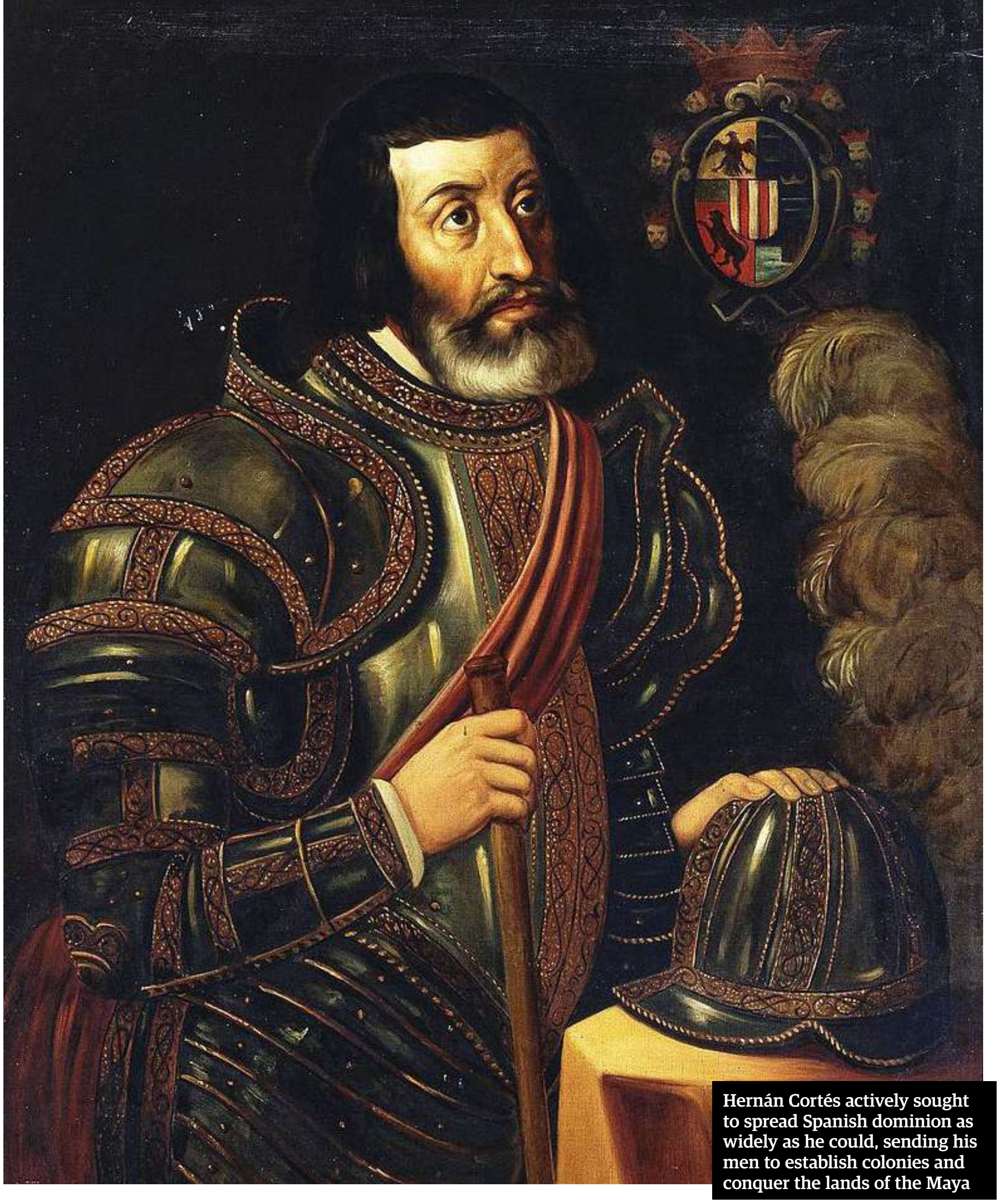
Wealth was a huge factor, which even they did not deny, but they also claimed they were fighting for a higher purpose in spreading Christianity – a motive that had at least some truth, as men such as Cortés seemed to go out of their way to convert natives and preach the power of the Christian god. Bernal Díaz claimed they had gone “to serve God and His Majesty, and to bring light to those who were in darkness, and also to get rich”.

It is often forgotten that the invaders were not alone in their mission. The Spanish conquistadors were also accompanied by likely dozens if not hundreds of African slaves and freedmen. Though rarely if ever mentioned in contemporary accounts, they still had a major impact, as did many locals.

Cortés was given female slaves from among the native population, a woman by the name of Malintzin, or Doña Marina, prominent among them. She spoke Maya languages and Nahuatl, the language of the Aztecs, and would prove a crucial interpreter to Cortés. He and the other conquistadors didn’t stay with the Maya for long, heading off in 1519 for their fateful showdown with the powerful Mexica, better known as the Aztecs, to the north. But the Spaniards’ unforeseeable triumph against the Aztec Empire changed the balance of power in the region. Clearly ruthless and expansionist in nature, the Spanish now had a strong grip on the continent and a large host of allies and subjects in the Nahuatl-speaking people.

The Spanish soon returned in numbers to confront the Maya, led in 1523 and 1524 by Luis Marín in the Chiapas region, and in 1524 by the wild and dangerous Pedro de Alvarado. Alvarado had garnered a reputation as an impatient and incredibly violent man – in an age of brutality, the fact that he was famed for his savagery speaks volumes. He “instilled apprehension and fear not only in native adversaries but also his closest associates, members of his own family included,” according to the historians Matthew Restall and Florine Asselbergs.

Having received permission from Cortés to move south into Guatemala, he was determined to carve out his own territory, hoping to be granted an ‘adelantando’ licence, which would give him the right to conquer and then govern the lands and its people. Alvarado gathered a company of 300 Spanish soldiers on foot and 120 on horseback. He also took around 3,000 native warriors. There were likely around 3,000 Nahuas – Mexica, Tlaxcalan and others. Having mustered a powerful force in Mexico City (formerly Tenochtitlán, the Aztec capital),



Hernán Cortés actively sought to spread Spanish dominion as widely as he could, sending his men to establish colonies and conquer the lands of the Maya

CLASH OF STYLES

THE MAYA AND SPANISH CONDUCTED WAR IN VERY DIFFERENT WAYS

WEAPONS

Spain: Steel swords, warhorses, crossbows and arquebuses

Maya: Bows, arrows, stone-tipped spears and blades

SOLDIERS

Spain: Hundreds of Spanish soldiers, supported by thousands of native American allies, African slaves and freedmen

Maya: Tens of thousands, mostly peasants called on to fight

TACTICS

Spain: The Spanish used their native allies to soften and tire enemies, deploying their cannons and arquebuses to shock and the cavalry to charge and devastate enemy groups

Maya: Used ambushes and hit-and-run tactics, firing missiles and projectiles extensively

he moved against the Maya in the highlands, dominated by the K'iche' and Kaqchikels, as well as the Tz'utujil Maya.

MAYA RESISTANCE

While the Aztecs had been conquered relatively quickly, the Maya would prove to be a very different proposition. The Maya civilisation was not a single, centralised empire like the Aztecs or the Inca in Peru, both of which were far more powerful but fell more easily due to being concentrated in major settlements and thereby easier to surround and subdue. The Maya were fragmented, and each state was used to fighting wars – as they did frequently with each other. Paradoxically, this actually made it harder for them to maintain their resistance in the long run as they were unable to unify and fight together against a common enemy. Indeed, the Spanish repeatedly exploited these Maya divisions.

The Maya also fought differently. They used hit-and-run tactics, ambushing their enemies and striking quickly. They were also prepared to quickly burn and abandon their own towns to deprive the Spanish of shelter and resources – a kind of scorched-earth policy that was particularly effective against an army that had no established supply line, like the Spanish. The Maya would also aim to capture enemies with the intent of enslaving or sacrificing them, though this was not a tactic used as extensively as the Aztecs.

Alvarado and his company crossed into Guatemala and were ferociously and repeatedly attacked by the K'iche'. A major confrontation was the Battle of El Pinar. The K'iche' faced the invaders with the vast majority of their fighting men but were resoundingly defeated, the Spanish cavalry playing a large part. The K'iche' made another stand near the Quetzaltenango valley and were defeated again.

The K'iche' rulers, realising that the Spanish and their vast number of Nahua allies couldn't be defeated head-on, asked for peace, inviting Pedro de Alvarado into Utatlán, their capital. But Alvarado sensed a trap, captured the two K'iche' kings and burned them alive (or possibly hanged them) before also burning the city. Alvarado, in a letter to Cortés a month later, tried to justify the move, suggesting the captured kings had confessed to planning to burn him first: "and they told me that they were to… burn me in the city, and that with this thought in their minds they had brought me here". Whether true or not, it suggests that even Alvarado realised that immolating the kings had been a particularly gruesome tactic.

The enemies of the K'iche', the Kaqchikels, saw in the Spanish an opportunity. They sent Pedro de Alvarado gifts, along with warriors to fight alongside the Spanish against the K'iche' and their other enemies. They then proceeded to push Alvarado in the direction of their foes. According to Díaz, "the caziques of Guatimala drew Alvarado's attention to some townships which lay at no great distance in front of a lake. The inhabitants of these places were at enmity with Guatimala." Alvarado duly moved against the Tz'utujil, destroying their main army on the shores of Lake Atitlán.

However, instead of consolidating his gains, Alvarado led his force south on a tour of destruction, pushing down to the Pacific coast as far as El Salvador before returning to the Kaqchikel capital, Iximche', which he renamed Santiago. He hoped, according to the authors of *Invading Guatemala: Spanish, Nahua, and Maya Accounts of the Conquest Wars*, to make the

© Wikipedia, Getty Images

capital like the burgeoning Mexico City and use it as a seat of power from which to control the Kaqchikels and their neighbours. But his demands for more and more gold turned the Kaqchikels against him, starting a six-year rebellion.

The Maya were hindered in their ability to resist because of one completely unintended killer the Spanish set loose: disease. Smallpox, in particular, ravaged the Maya population. With the loss of so many people due to the outbreak, displacement and war, the Maya population collapsed, hampering any chances of resisting and recovering sufficiently to fend off further Spanish attacks.

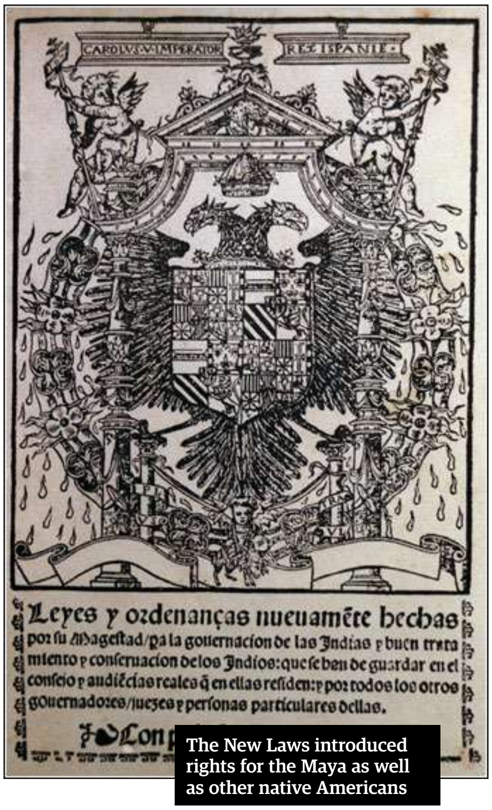
CORTÉS

Cortés himself moved against the Maya in 1525, marching a large force through Itza territory. His primary motive was to travel down to Honduras, where another Spaniard, Cristóbal de Olid, had rebelled and set himself up as governor. He made plans to take the more difficult route overland, rather than by sea, so that he could discover, as he put it himself, "many unknown lands and provinces... [and to] pacify many of them, as was later done".

Cortés moved his force of around 300 Spaniards and 3,000 allies through the land of the Kejache, who were at war with the Itza. Passing multiple burned settlements, Cortés made his way to the shores of Lake Petén, where he met with the Itza ruler, Ajaw Kan Ek'. When the king arrived Cortés put on a great show of Mass, using the Christian rituals as a way of impressing the Itza and displaying the power of the Church.

Cortés, in letters to the Spanish king (and therefore a far from reliable account of any proceedings), said that he impressed upon the ruler the power of God, who responded that he was interested and prepared to burn his idols should Cortés accompany him to his capital. Cortés also related the power of the Spanish king, claiming the ruler and "everyone in the world were your [the king's] subjects", including many in these parts who had already surrendered to the "imperial yoke". Ajaw Kan Ek' responded that "he wished to be Your Majesty's subject and vassal and that he would consider himself fortunate to be [the subject and vassal] of such a great lord"

Assuming that is more or less what was said, it was, according to Grant D Jones, "probably a stalling action designed to please this dangerous enemy and convince him to continue his journey as quickly as possible. Or,


CAROLVS·V·IMPERATOR
REX·ISPANIE·

Leyes y ordenanças nueuamẽte hechas por ſu Mageſtad/pa la gouernacion de las Indias y buen tratamiento y conſeruacion delos Indios: que ſe han de guardar en el conſejo y audiẽcias reales q̃ en ellas reſiden: y por todos los otros gouernadores/juezes y perſonas particulares dellas.

Con

The New Laws introduced rights for the Maya as well as other native Americans

DISEASE SPREADS

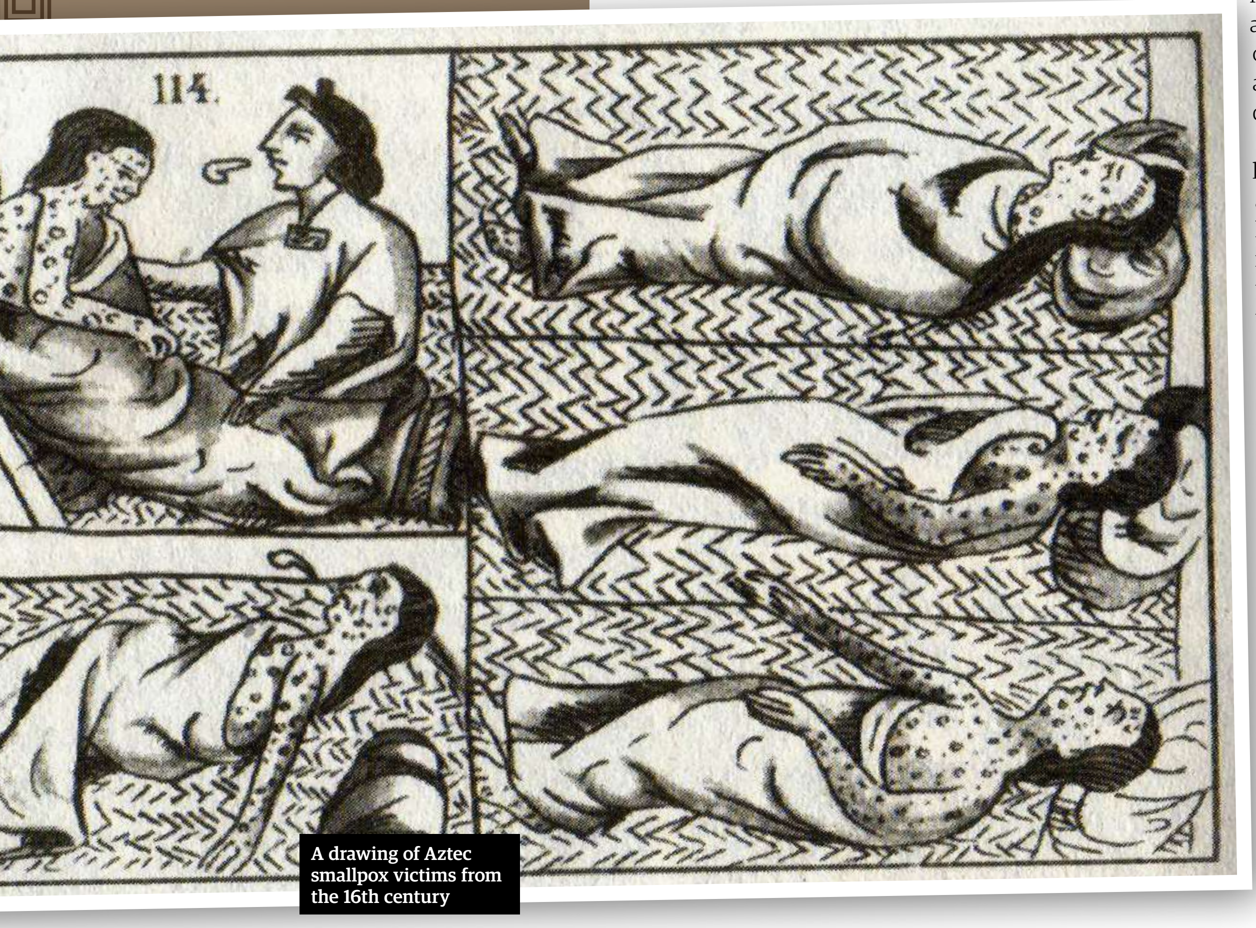
THE SPANISH UNWITTINGLY UNLEASHED OLD WORLD DISEASES ON THE AMERICAS

When the Spanish arrived on the shores of the New World, they were far from the most dangerous passengers on their ships. For within the hulk of their vessels lurked an unseen menace: disease.

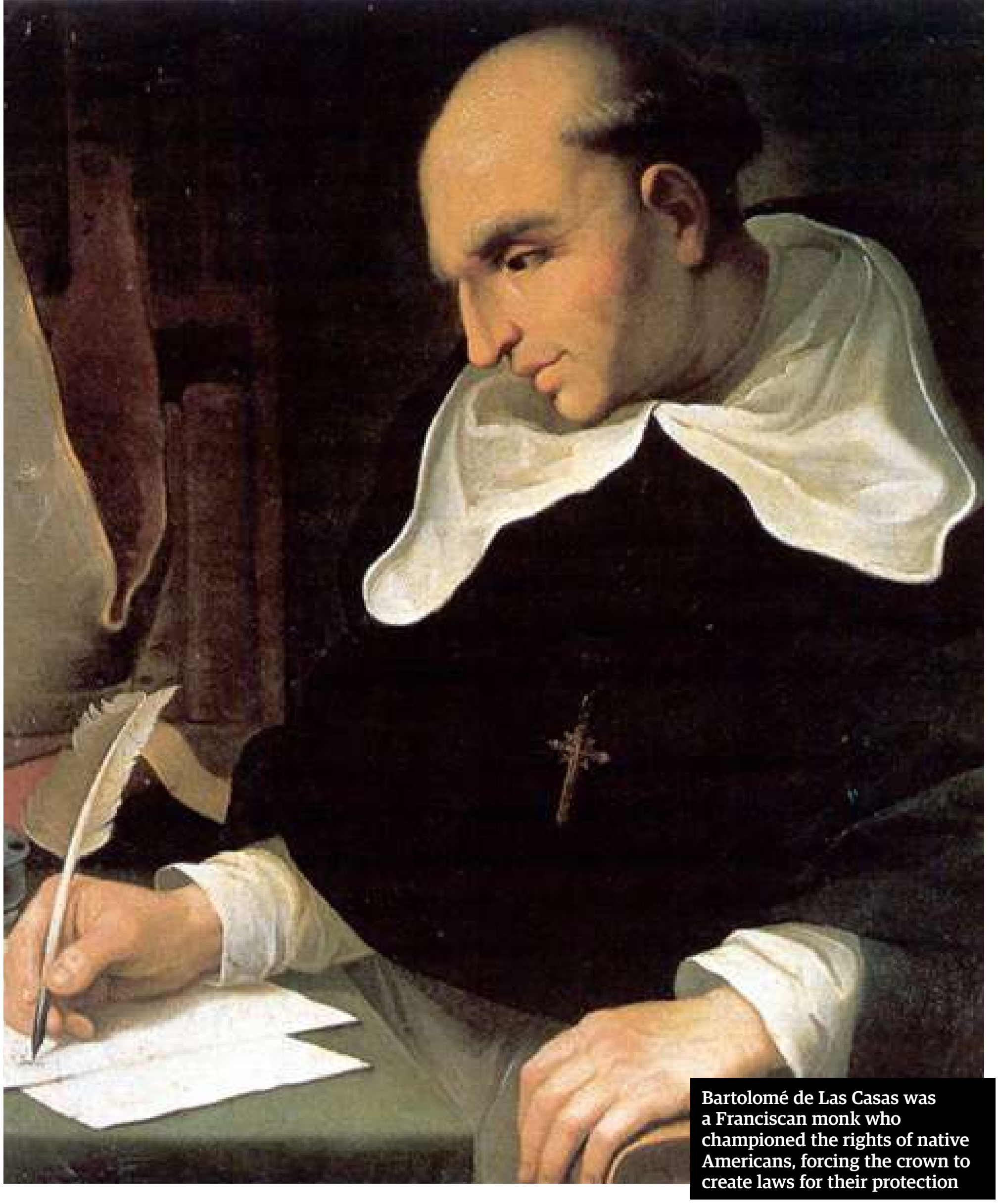
Having existed in isolation from the rest of the world for tens of thousands of years, the people of the Americas had never been exposed to the riot of diseases that had been traded between the other continents. A particularly lethal threat was smallpox, which causes a fever and severe blistering all over the body. Generally claiming the lives of around 30 per cent of those infected with it, when spread among the Maya people it killed double that amount. Motolinia, a Franciscan monk, described the devastation.

"As the Indians did not know the remedy of the disease, they died in heaps, like bed bugs. In many places it happened that everyone in a house died, and as it was impossible to bury the great number of dead, they pulled down the houses over them, so that their homes became their tombs."

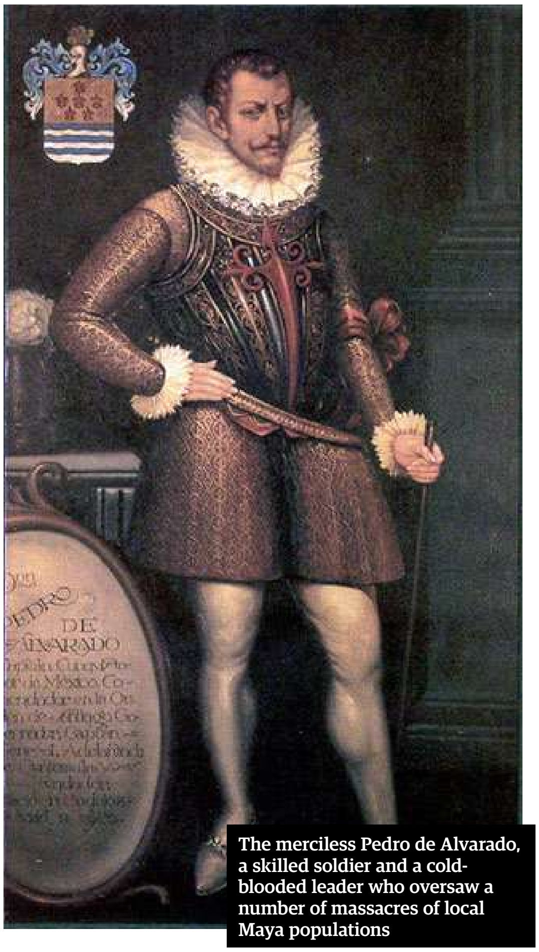
The ravages of smallpox weakened the native population's ability to fight, but it also had a huge psychological impact. Seeing the Spanish remain unharmed while their appearance had brought widespread death led many to believe it was a divine act of destruction or that the Spanish had unknown power. They did – they were just completely unaware of it. The Spanish conquests may have been very different if not for the plague that came with them.



A drawing of Aztec smallpox victims from the 16th century



Bartolomé de Las Casas was a Franciscan monk who championed the rights of native Americans, forcing the crown to create laws for their protection



The merciless Pedro de Alvarado, a skilled soldier and a cold-blooded leader who oversaw a number of massacres of local Maya populations

as some in Cortés' party suspected, he may have been attempting with sweet words to lure Cortés to Nojpetén so that the Itzas could murder him.

As Cortés' party moved on they ran low on food and provisions, being compelled to march day and night for days. The risk of hunger and starvation was always great during these expeditions, exacerbated by the prevalence of disease.

The party continued and finally found the Spanish they had been searching for, only to discover that Cristóbal de Olid had already been executed as a traitor by other officers. Cortés established new settlements on the coast and returned to Mexico City in 1526.

These expeditions, though demonstrating Spanish power, had failed to conquer large swathes of Maya territory. The Maya had survived through a mixture of diplomatic promises, hit-and-run tactics, abandoning towns and lacking a single, central authority. The relatively slim pickings in terms of natural resources also reduced the attraction of the region to the Spanish.

During the following years Spanish territory was solidified in Chiapas, although rebellions occurred there from 1528. The coast of the Yucatán Peninsula, meanwhile, was invaded by a Spanish force led by Francisco de Montejo, who was soon driven off. It was even reported that a Spaniard, Gonzalo Guerrero, who had been washed up on the Yucatán coast when his ship sank in 1511, had led warriors against the invaders. Montejo would make multiple attempts to conquer the region in the following years.

In 1527 Jorge de Alvarado, Pedro's brother, moved in to subdue the lands his sibling had failed to pacify. He moved a force of hundreds of Spanish and thousands of native allies into Kaqchikel lands, securing a base at Chimaltenango, from which he and his allies attacked other Maya rebels in the region. By 1529 Jorge had largely succeeded in pacifying the Guatemalan highlands.

The Spanish pushed the Maya people into colonies, or 'reducciones', housing them and keeping them under their control. The Spanish practised a system of encomiendas, whereby the conquering Spanish could use the labour of those who had been defeated. This was an official licence to exploit the natives for profit. The Spanish were more "interested in control of the population than control of the land", being "more entrepreneurially than feudally minded," according to historian W George Lovell. The Spanish made money working the land with the slave labour. Many rebelled against this, hiding in forests or highlands.

After his repeated attempts at conquering northern Yucatán, Montejo's son took responsibility for the conquest and in 1542 seized control in the region. In 1546 the Spanish finally had the region under their thumb.

The Maya, devastated by famine, years of war and disease, had been systematically exploited by their conquerors, but in 1540 some acknowledgement of the brutality and unsustainability of this was received in the form of the New Laws of the Indies for the Good Treatment and Preservation of the Indians, which established laws to end the slavery and oppression of native Americans and grant them some protection. While it was hard to enforce and often circumvented, it was at least a move to stop the worst cases of exploitation.

Less than 50 years after the Spanish had first encountered the Maya in their canoe, the Europeans were in charge of large swathes of Maya lands. Only those in the Petén region could still claim to be free of the Spanish. Many Maya who wished to continue fighting retreated there to make a series of final stands against the conquistadors. Though they had fought with ferocity and determination, the Spanish tide could not be held back forever.

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THE END OF THE RESISTANCE

Despite their valiant efforts, the Maya ultimately had no chance of reversing the tide of Spanish suppression

WRITTEN BY CHARLES GINGER

Miguel had come to the New World to find his fortune, and perhaps secure a promotion or two that would allow him to return to Spain and finally buy the plot of land he'd always coveted. It had taken everything out of him to achieve both, and God knew he'd been made to earn his good fortune over the last few years, but he couldn't help smiling at the thought of how the people of his village would receive him now. The stories he'd have to tell, the money he'd have to spend: it had been hard, brutal even, but civilising the savages of this godforsaken land had been worth it.

It seemed to him now as he strode down the cobbled street that formed the main artery of the town - a slice of home surrounded by an ocean of jungle - that the natives were beginning to appreciate the benefits of Spanish rule. It had taken time, but many of them appeared to be grateful to have been offered the salvation of holy men, their churches, and, above all, the embrace of the only true god. Theirs really was a sacred mission.

A scream interrupted his flow of thought as he approached the spire of the church. Running. Suddenly, people were panicking. Another scream, followed by the movement of dark silhouettes in the trees. A painted warrior burst from the undergrowth, a javelin clenched in his hand and an elaborate row of feathers crowning his head. Yet it was the look in his eyes that told Miguel everything he needed to know. As more armed men poured from the trees, he began to step back, turning for the tide of shouting locals and startled Spaniards hurtling down the road. He didn't get far before he felt a thump on the back of his skull and was sent crashing to the ground. Blackness enveloped him then, the grimace of a hulking figure grasping a bloodied club the last thing he saw.

THE YOLK OF THE YUCATÁN

By November 1546 huge swathes of the Yucatán region had been subjugated by the Spanish, brought to heel by Francisco de Montejo the Younger (son of Montejo the Elder, Captain General of Yucatán and a man who had tried unsuccessfully for years to pacify the fractious region). In 1541, Montejo, leading 400 troops, had established the first permanent Spanish settlement in Yucatán.

Perhaps sensing which way the wind was now blowing, many Maya leaders duly submitted to Spanish rule, including the head of the Xiu Maya. He was followed by Tutal Xiu, the strongest ruler in the entire region of northern Yucatán. His subsequent conversion to Christianity encouraged his fellow leaders to acquiesce, and gradually the western Yucatán came under Spanish influence. However, not every native was quite so accepting of foreign overlords and a new god.

The lord of the Canul Maya had resisted Montejo's demands in 1541 to kneel to the Spanish crown, and while he had been pursued and punished for his insubordination by Montejo's cousin, many of the nobles of the eastern section of the Yucatán Peninsula remained hostile.

Among the rebellious factions were the Cochua and Cupal, and despite their initial defeats they rose up against the Spanish once more in 1542 (the same year that Montejo founded the city of Mérida on the coast of the Gulf of Mexico). Along with other groups, including the Chetumal and Sotuta, they managed to maintain their independence.

In November 1546, a network of eastern provinces staged an uprising - a host of Maya peoples, including the Tazes and Uaymil, working together to try and oust the Spanish from the Yucatán Peninsula once and for all.

AN ERUPTION IN THE EAST

Despite the presence of fewer than 300,000 Maya in the Yucatán Peninsula come 1546, the Spanish still experienced serious resistance in many locations. Part of the reason that they found it so hard to suppress the natives was their

geographically divided nature. Wading through dense forests in search of hardened tribal warriors familiar with every stone and tree posed the Spanish a wealth of obstacles, and this type of guerrilla warfare constantly halted their progress across the peninsula.

An inevitable side-effect of Spanish efforts to coerce and convert the native population was bitter division between Maya groups. Some, like the Mani, were members of the Mayapán League, a chain of northern and western provinces that gradually came to accept the Spanish. Other provinces, located in the south and east of the peninsula, continued to self-govern, and naturally they began to view their neighbours, bowing to foreign rulers, with suspicion. These ideological differences resulted in bloodshed in 1530 when the Cocum slaughtered 40 members of the Mani elite.

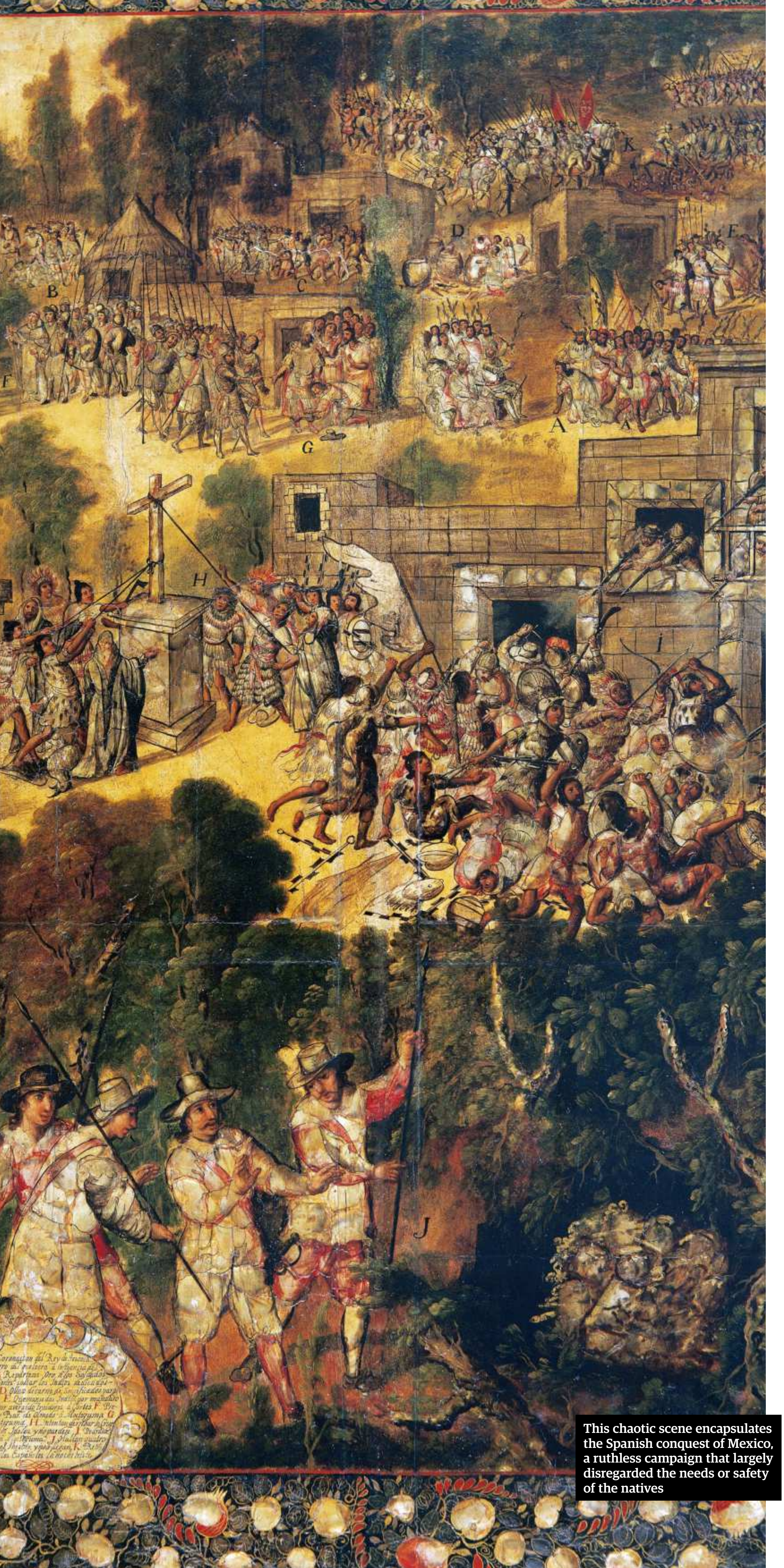
Desperate to quell the violence and instil stability, the Spanish resorted to forcing the locals into labour settlements, which understandably enraged the Maya, who responded aggressively. Incredibly, they managed to force the Spanish out of Chichén Itzá in the 1530s, a success that, ironically, would lead the Maya to make a fatal assumption: the Spanish could be beaten.

Urged on by previous victories against the militarily superior Spaniards, a collection of eastern provinces assaulted a number of towns on 8 November 1546, hitting Valladolid particularly hard. The Maya set about capturing and mutilating a number of Spaniards and their local allies, with women and children counted among their victims. Two brothers, Juan and Diego Cansino, were especially unfortunate.

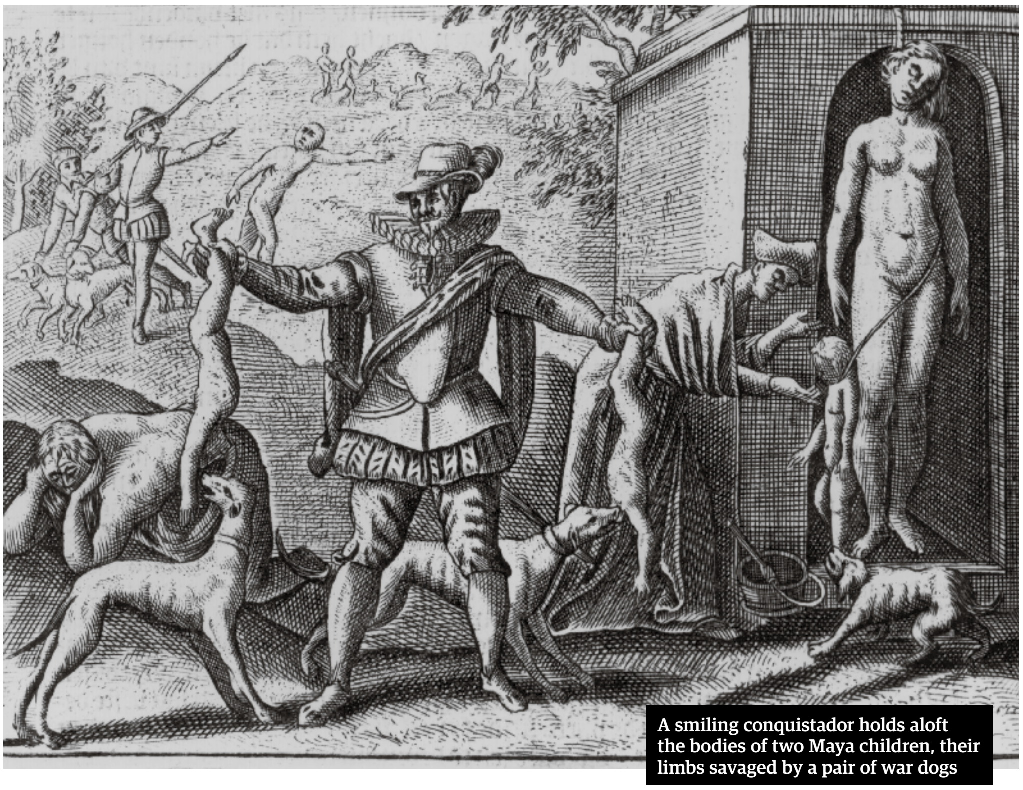
In the Maya's martial culture, the capture of high-ranking enemies was of paramount importance. Along with seizing as much booty as they could plausibly carry, the taking of noble prisoners was a top priority, and for the most important of reasons: sacrifice. The Maya viewed blood as a potent source of power, and the spilling of noble blood was, in their view, the best way to nourish and please their many gods.

Their methods of sacrifice varied, but in the cases of Juan and Diego, the bow and arrow was the chosen tool. As the sons of a conquistador, they were both especially loathed and viewed as important enough to offer to the heavens. The siblings were bound to a pair of wooden crosses (a clear swipe at their Christianity) and then riddled with arrows, resulting in an agonisingly slow end. When they had eventually succumbed to their wounds they were cut from the frames holding their corpses and dismembered.

Bloody parcels of their flesh were then sent out to a number of Maya settlements in a bid to stoke the flames of rebellion. This gruesome message seems to have had the desired effect, as the initial revolt transformed into a campaign that lasted for 18 months.



This chaotic scene encapsulates the Spanish conquest of Mexico, a ruthless campaign that largely disregarded the needs or safety of the natives


A smiling conquistador holds aloft the bodies of two Maya children, their limbs savaged by a pair of war dogs

WAR IN ALL ITS GUISES

One of the most intriguing aspects of the Spanish conquest of the Maya is the wildly different ways in which both sides approached the conflict. The Spanish had traversed the Atlantic in hulking ships, the troops that these vessels disgorged onto the sands of South and Central America armed with advanced weapons, including crossbows, matchlocks and light artillery. They also sported heavy lances, swords, pikes and rapiers, and their bodies were protected by plates of armour and domed helmets. In comparison, the Maya were positively primeval.

Wielding lethal spiked clubs, bows and arrows, stones and spears, the natives wore only a shirt stuffed with rock salt for protection against enemy blows, and sometimes not even that. Used to fighting similarly armed soldiers with the same motivations (treasure and prisoners), the Maya battling the Spanish invasion were confronted with a completely alien enemy, and the gulf between them was not only a matter of vastly different arsenals.

As was customary for any European force in the 16th century, the Spanish that landed in the New World were accompanied by thousands of horses, as well as war dogs. The Maya had never even encountered a horse, let alone possessed the experience or weaponry to counter them. They also lacked such vital tools as the wheel, gunpowder or steel, all of which the Spanish relied on heavily to execute their campaigns.

However, despite the cavernous gap between the two belligerents, it would take the Spanish almost 200 years to completely suppress the fiercely independent Maya. Part of the reason was their intelligent use of terrain.

Aware that in an open battle they would almost certainly be annihilated, the Maya resorted to setting ambushes and digging pits lined with spikes in order to hamper the Spanish and disrupt cavalry charges that would otherwise have swept their scantily clad bodies from the field. Hit-and-run raids enabled the Maya of the eastern provinces of the Yucatán to regularly surprise the Spanish before fleeing back into the sanctuary of the jungle.

For their part, the Spanish were often utterly perplexed by their opponents' methods. Desperate to concentrate the locals into newly founded towns (reducciones) modelled on settlements in their native Spain, the conquistadors viewed the taking of prisoners as a hindrance. This opinion may go some way to explaining why the Spanish were so eager to dismiss Maya efforts to capture high-ranking Spaniards as simple military incompetence.

According to a number of Spanish accounts, the Maya made constant attempts to encircle and capture leaders such as Hernán Cortés and Francisco de Montejo (Montejo the Elder), yet these men were not killed, proving that the Maya were trying to take them captive. But in an obvious attempt to belittle their resilient foes,

MONTEJO THE ELDER

MEET THE MAN WHO HAD HIS EYES ON A PERSONAL EMPIRE

Born in Salamanca, Spain, in 1479, the man who would come to be known as Montejo the Elder left his homeland in 1514 and sailed to Cuba in search of adventure. Once there he joined an expedition to the Yucatán and Gulf of Mexico prior to signing up to Hernán Cortés' march against the Aztecs.

Experienced in the art of battling against hostile locals in unforgiving terrain, in 1527 Montejo was given royal approval to colonise the entire Yucatán Peninsula for the Spanish crown. Upon arriving, Montejo burned his four ships in order to deter his men from sailing back to Cuba.

Aided by a fearful local population decimated by a 1511 smallpox outbreak, Montejo cut deep into the southeast of Yucatán, reaching Chetumal and seizing sites including Campeche.

Hoping to carve out his own personal fiefdom, a determined Montejo was ultimately undone by a lack of resources and the success of one Francisco Pizarro, who had unearthed vast wealth in Peru. This promise of gold encouraged many of Montejo's men to abandon his drive into the Yucatán, and it would ultimately fall to Montejo's son to complete the mission his father had started.

A monument to Montejo the Elder and his son, Montejo the Younger, stands in Mérida

© Wikipedia, Getty images

the Spanish tried to paint the Maya as bumbling savages incapable of dispatching supposedly superior Christian warriors.

THE ROAD TO NOJPETÉN

After the initial shock of the 1546 uprising, the Spanish and their native supporters composed themselves and eventually defeated the clans that had banded against them in a pitched battle. Though the bodies of 20 Spaniards and hundreds of native allies were scattered across the field, their victory had signalled the final conquest of north Yucatán. The Spanish were slowly tightening their grip on the region.

Soundly beaten and with their former lands now under Spanish control, many of the Maya from the north scurried towards the south and the safety of the Petén Basin, home to the city of Nojpetén and the ferocious Itza.

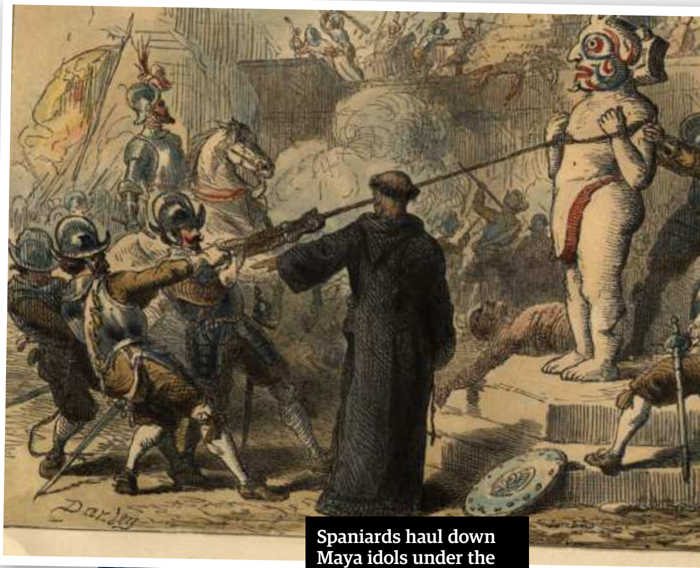
Since Hernán Cortés' first encounter with the Itza in 1525, the Spanish had avoided making any further attempts to convert the Itza people to Christianity. On some occasions they had been well received by the Itza but their religious overtures declined; on other occasions the Itza had resorted to putting their own views across at the end of a blade. The massacre of Spanish parties by the Itza naturally resulted in retaliations, with members of the Itza tortured and put to death in return.

It was this open hostility - coupled with political upheaval in Spain, which distracted the crown from its efforts in the New World - that brought about an almost century-long break between Spanish efforts to finally bring the Itza to heel. It was not until 1692 that the Spanish once more resumed their conquest of the south of the Yucatán following a proposal by a nobleman named Martín de Ursúa y Arizmendi that a road be built from Mérida down to the Spanish holdings in Guatemala. As the road was built, Arizmendi suggested, local populations could be regrouped into congregaciones that would be easier to oversee.

Throughout the latter years of the 17th century, the Spanish gradually carved their way further south. As had been the case since their arrival in the New World, the Spanish were heavily reliant on the Church to aid them in their conquest. The Church (especially its friars) was integral, as it provided the 'moral' and 'spiritual' justification for what was without doubt a war of conquest. While the Spanish may have been determined to convert their 'heathen' adversaries to the way of god, had the Americas held no promise of wealth the invasion would never have been attempted. It was therefore useful to have a religious front behind which the Spanish could hide their blatant lust for gold and other materials. And it would be a man of god who would turn the tide against the Itza.

A series of bloody skirmishes and cruel betrayals had marked the Spanish advance into the deep south of the Yucatán. Their crafty adversaries had continued to be a thorn in their side - on one occasion a horde of 2,000 Itza had canoed across Lake Petén Itzá and surrounded a small band of Spanish troops, who were forced to unleash a volley of fire before rushing to escape.

Adaptive as ever, the Itza constructed a city called Tayasal (also known as Nojpetén) deep



Spaniards haul down Maya idols under the watchful eye of a friar

THE COURAGE OF THE LAKANDON

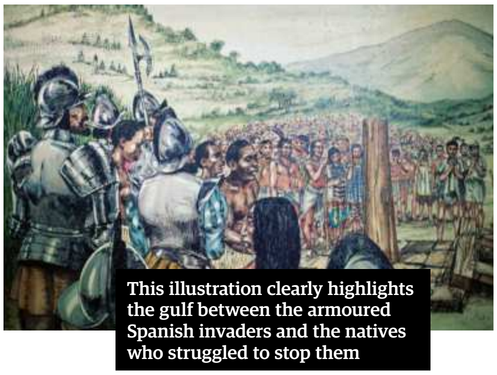
WHEN THE SPANISH DECIDED TO CONNECT TWO OF THEIR NEW TERRITORIES, A FEROCIOUS OPPONENT STOOD BRAVELY IN THEIR WAY

In 1695, it was decided by the Spanish authorities governing large swathes of the New World that linking Guatemala to the Yucatán Peninsula would aid trade, travel and further conquest. Never ones to stop and consider the potential consequences of their grand plans, they proceeded to embark on a three-pronged assault on the lands of the Lacandon Jungle, home to the ferocious Lakandon Ch'ol.

Deemed a grave threat, the Lakandon were at the time ravaging the Guatemalan Highlands to such an extent that travel through the area was considered unwise. In fact, such was the perceived threat posed by these resourceful people that the Church openly advocated military intervention for fear that their work (converting natives and overseeing the erection of churches) would be undone.

Withdrawing ever deeper into their jungle home, the Lakandons fought hard to resist the Spanish incursion, but one by one many of their holdings fell, with the Spanish constructing a fort on the shores of the Lacantún River.

Aided by hundreds of Maya allies, the Spanish, under the leadership of the president of a superior court in Guatemala named Jacinto de Barrios Leal, succeeded in driving the Lakandons out of their homes, the displaced natives later resettled in the Highlands they'd once pillaged.



This illustration clearly highlights the gulf between the armoured Spanish invaders and the natives who struggled to stop them inside the jungles of northern Guatemala. The last bastion of Maya independence, the Spanish knew they had to take it in order to finally complete the conquest of the Maya people.

A SANCTUARY NO MORE

On 26 February 1697, Martín de Ursúa y Arizmendi reached the shores of Lake Petén. He was accompanied by a group of soldiers, who he set to the task of constructing a boat capable of transporting both men and canons. However, before he unleashed his forces upon the city of Nojpetén, Arizmendi offered the Kan Ek (king) the chance to discuss peace terms. Perhaps out of fear, perhaps foolishness, the king failed to take Arizmendi up on his offer, and instead a sea of Maya defenders began to trickle out across the shoreline, with some manning boats and sailing across the lake. Arizmendi was left with only one choice.

The Spanish stormed the city, slaughtering wave upon wave of its defenders and incurring only a few losses. Although they were defending their homeland and what was by now the only remaining Maya kingdom, the defenders had little chance against the cannons of an enemy hell-bent on ending the Maya resistance once and for all. It has taken the Spanish almost two centuries to get to this point, but it only took them a few hours to finish off Nojpetén.

Any hope that the city's people may have harboured was cleverly swept aside by Padre Andrés de Avendaño y Loyola. This intelligent holy man had taken the time to learn Maya hieroglyphs, and used this knowledge to convince the natives that their own calendar had prophesied their downfall in that very year. In the face of such divine judgement, what argument could the Maya have hoped to muster?

Racing for the jungle, the last keepers of Maya independence retreated, leaving Nojpetén to be occupied and dramatically renamed as 'Our Lady of Remedy and Saint Paul, Lake of the Itza' by a triumphant Arizmendi. Any hope of a Maya resurgence was swiftly crushed when the nobles of Nojpetén, including their erstwhile king, were captured.

GONE BUT NEVER FORGOTTEN

When you consider the overwhelming odds stacked against them, it is tempting to think that the defeat of the Maya was inevitable. Yet the fact that it took the Spanish from 1525 to 1697 to finally extinguish the flame of Maya independence is testament to how incredibly resilient the natives of this jungle-ridden part of the world were. Despite their own political differences, lack of modern weaponry and the advanced technology that the Spanish enjoyed, the Maya fought courageously until the bitter end.

Their legacy lives on today, a history of a proud, ingenious, brave people who erected stunning monuments to their gods, crafted varied and intricate artefacts, studied the stars and carefully utilised the delicate lands around them to support their people. For all their efforts, the Spanish never did ultimately succeed in destroying the soul of the Maya. No amount of gunpowder could ever have done that.

A colonial church in modern-day Mérida, Yucatán. Without the efforts of the Church the conquistadors would have found their struggle to suppress the Maya even harder

THE END OF THE MAYA

Explore the continuing saga of the Maya people after the fall of their civilisation

WRITTEN BY SCOTT REEVES

The Temple of the God of Wind at Tulum is a popular destination for tourists holidaying on Mexico's Riviera Maya

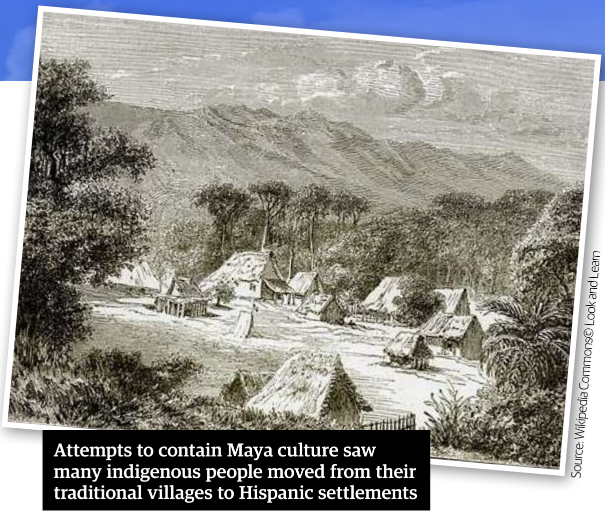
The brief but bloody battle at Nojpetén saw many Maya warriors cut down by Spanish soldiers. Survivors in the last Maya capital jumped into the water around the hastily abandoned island city; some drowned, others made it to shore and crept away into the rainforest. The once-mighty Maya Empire ended with little more than a whimper.

The Maya people may have been conquered, but their story was not over. Almost 300 years after the fall of Nojpetén, Rigoberta Menchú – a Guatemalan of Maya descent – was awarded the 1992 Nobel Peace Prize for her work promoting the rights of her country's indigenous population. As Menchú put it, "We are not myths of the past, ruins in the jungle, or zoos. We are people and we want to be respected." Around 6 million Maya people continue to live in Mesoamerica, their fortunes ebbing and flowing with the changing attitudes of those who control the land that they once called their own.

Perhaps the greatest changes to Maya society occurred, as might be expected, immediately after the Spanish conquered Central America and established the Captaincy General of Guatemala. The scattered Maya population – already much-reduced due to epidemic diseases introduced from Europe – were concentrated into new towns and villages that were often constructed from scratch, breaking ancient bonds with the land.

The relocation of the Maya and redistribution of land, however, required labour. Spanish landholders were granted the right to have indigenous inhabitants carry out unpaid or low-paid work building the villages and labouring on farms, mines and roads. The work was intermittent, essentially a form of part-time slavery, with the Maya free to return to their own lands when they were not required.

The intention was to civilise and tame the land, but also the indigenous people who lived upon it. In return for free labour, the Spanish landholders were expected to convert the Maya to the Christian religion. Both Catholic and Maya religions already had similarities: the use of priests, fasting, prayer, confession and pilgrimage; both had as their central figures a god who died and was resurrected. Aspects of Christianity were absorbed by the Maya, although often with some adaptation. The Maya enthusiastically adopted patron saints – perhaps seeing them as an extension of their own polytheistic belief system – and used the Roman alphabet to transcribe ritual and historical texts, which had previously only existed in glyph form. However, the Maya were slow to completely switch to a new belief system despite the best efforts of Catholic missionaries.



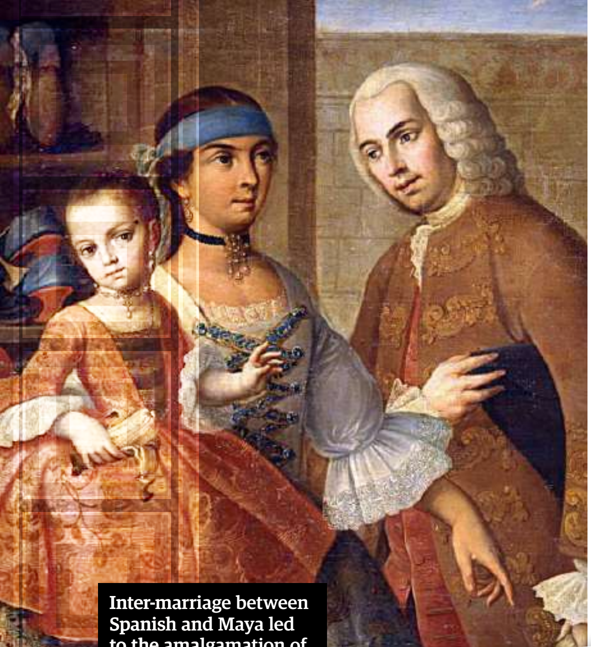
Attempts to contain Maya culture saw many indigenous people moved from their traditional villages to Hispanic settlements

Source: Wikipedia Commons© Look and Learn

By 1724, nearly three decades after the fall of Nojpetén, Spanish control over Mesoamerica was secure enough that their attitude towards the Maya began to relax. With a basic infrastructure in place, the system of forced labour was abolished and villages were free to manage their own affairs, particularly those most remote from the colonial masters. Spanish and Maya culture continued to amalgamate and the distinction between them eroded with the birth of mestizos – people with mixed Spanish and Maya ancestry.

Indigenous villagers produced clothes, baskets and pottery in the same way as they did before

Source: Wikipedia Commons© Popo le Chien



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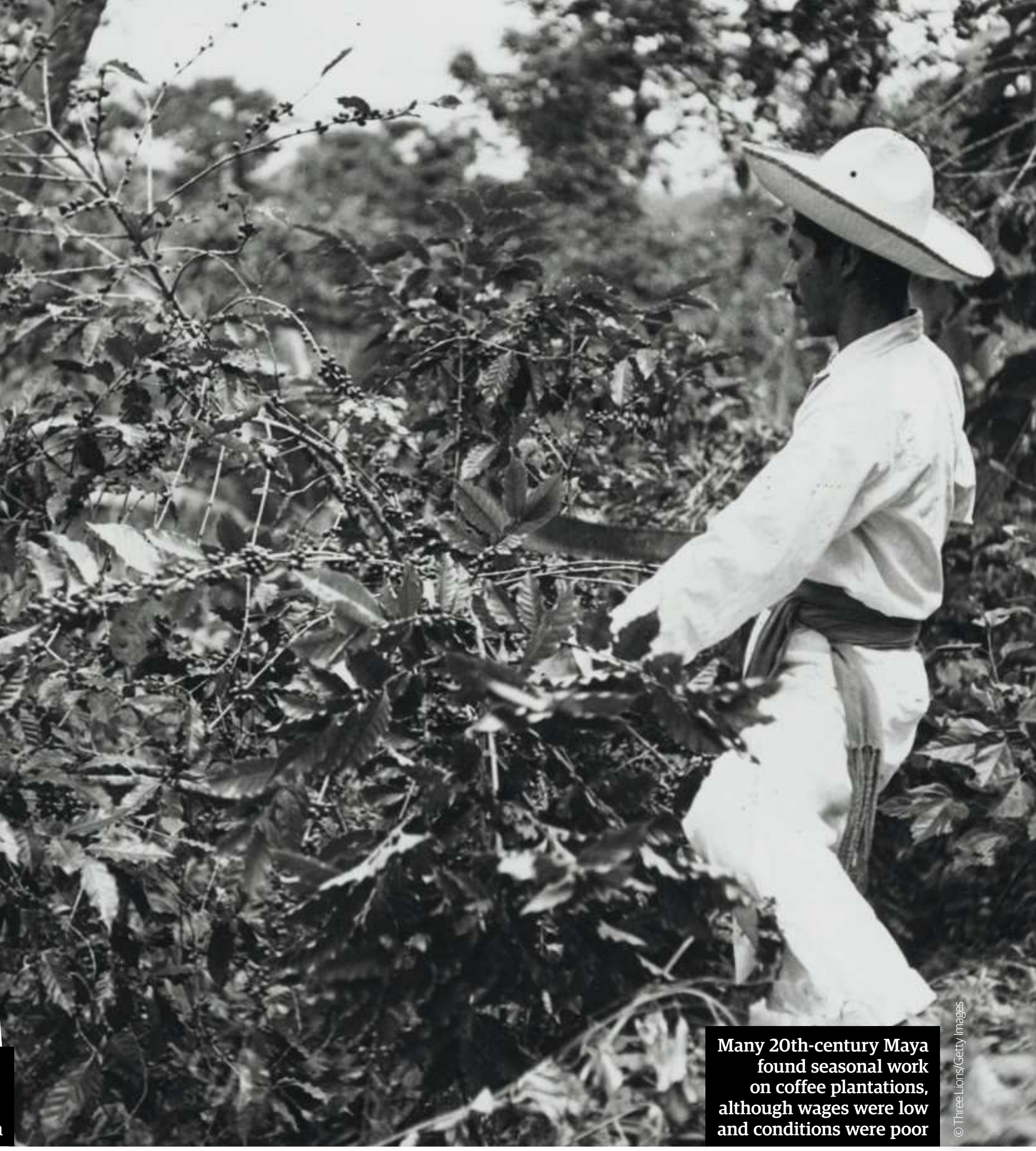
Inter-marriage between Spanish and Maya led to the amalgamation of cultures and the birth of mixed mestizo children

By the 1940s, a traditional Maya life was a fusion of ancient and modern



Many 20th-century Maya found seasonal work on coffee plantations, although wages were low and conditions were poor

© Three Lions/Getty Images

the conquest, trading them in community markets. Maize and beans continued to be the staple foods, but chicken, beef and pork began to take over from game. This led to a change in the landscape as forests were cleared for pasture, a task made easier with the help of new Spanish iron and steel tools. More problematically, some Maya fell for the strong liquor the Spanish distilled. Although the Maya were no strangers to alcohol – maize beer was common in the highlands, and mead was popular in the lowlands – the far stronger European aguardiente led to alcoholism becoming rife.

When the Spanish colonies began to win independence from their European overlords in the 1820s, the newly independent nations needed to decide how they would treat their native populations. In Guatemala, the government was willing to allow the Maya who lived in the highlands a degree of freedom. However, that was not the case in the more distant provinces of New Spain. In Chiapas, arguments over the future direction of the state (it would be incorporated into Mexico) led to internal conflict that included a number of Maya revolts. Perhaps the greatest upheaval was felt in another Mexican state, Yucatán, where a Maya revolt led to the 54-year Caste War.

As the 20th century dawned and an uneasy peace fell in Yucatán, the wider Maya lands were under threat once again. Wanting to improve his country's economy and ability to compete in the world market, Guatemala's President Rufino Barrios abolished the communal lands held by the Maya and imposed a new system of seasonal forced labour. Maya were transported from the highlands to work on coffee plantations in the foothills, often for such low wages that workers often fell into debt with their employers. During the rest of the year, they returned home to grow corn and produce craft items that could be sold in Maya markets.

Spanish-speaking ladinos (those who were Westernised and rejected native culture – predominantly mestizos, but also included some Europeans and Hispanicised Maya) flocked to settle in the old Maya communal lands and a two-tier system quickly emerged. While the Maya laboured for low wages in poor conditions, the ladinos were professionals, shopkeepers, teachers, priests and supervisors, bringing Spanish-Guatemalan language, religion and food with them. A new form of Maya exploitation had begun, and the Maya culture eroded with it.

Yet even as the Maya people found their contemporary culture under attack, their ancient culture was slowly becoming valued by modern governments due to its ability to attract tourists and their money. The first hotel opened close to Chichén Itzá in 1930, when only a few dozen filled its rooms each year. Yet word got out and travel became easier, leading to an explosion in visitors that forced the Mexican Government to put all pre-Columbian monuments under state ownership in 1972. By 2017, Chichén Itzá was receiving more than 2 million visitors a year. Taking advantage of the interest in Mexico's indigenous past, a rich stretch of the Yucatán Peninsula's Caribbean coastline is now known as the Riviera Maya, where vast all-inclusive resorts jostle for beachfront space with small boutique hotels.

Guatemala boasts the equally impressive rainforest city of Tikal, although its attempts to coax tourist dollars on the back of Maya history were less successful due to a vicious internal conflict, during which post-conquest Maya fortunes reached their lowest point. The Guatemalan Civil War encroached on the Maya when the Guerrilla Army of the Poor – a Marxist-Leninist group influenced by the success of the Việt Cộng – fought alongside other leftist rebel groups against the military dictatorships that came to power after the United States-backed coup d'état in 1954. Based in the highlands and mostly backed by the indigenous Maya, the Guerrilla Army was viewed by the military as a legitimate target, but the nature of underground warfare meant that it was difficult to isolate rebel participants from innocent supporters and bystanders.

Beginning around 1975 and peaking during the first half of the 1980s, the Guatemalan military switched to the systematic use of terror against the Maya. Government forces and death squads pinpointed locations where the Guerrilla Army was thought to operate and went in with ruthless fury, identifying villages for annihilation and carrying out more than 400 massacres. Suspected fighters were not just killed – they were beheaded, garrotted, burned alive and hacked to death with machetes. Women were raped and children deliberately targeted in psychological warfare. In Cocob, soldiers searching for guerrilla fighters in April 1981 killed 65 civilians, including 34 children. The following month, a masked informant identified 70 subversives in San Francisco Cotzal; half were immediately executed, half were taken away and never returned.

In total, around 150,000 Maya were killed, with an additional 40,000 disappeared – presumed murdered but with no physical proof. Those who survived faced continued attempts to destroy their traditional culture. Uprooted communities were corralled into model villages manned by Christian missionaries. At least 250,000 children nationwide were estimated to have lost at least one parent to the violence, further loosening familial ties to Maya culture. Attempts have been made to reconcile and move on from the Guatemalan genocide, but scars remain in the form of instability and social inequality in Maya areas.

In the 300 years since the fall of Nojpetén, the Maya have continued to face attack as the modern world encroaches on their land, their traditions and their culture. Many Maya survive in Mesoamerica – some 6 million, including 41 per cent of Guatemala's population and ten per cent of Belize's – with hundreds of thousands more in California, mostly migrants who fled the Guatemalan Civil War. The world in which they live is unrecognisable to the one prior to the European conquest, but having survived colonial rule, independence, civil war and genocide, the Maya culture endures. The Maya people have lived in Mesoamerica for thousands of years and hope to continue to do so for some time yet.

Traditional Maya crafts still survive, an echo of a lost empire

© robertharding / Alamy

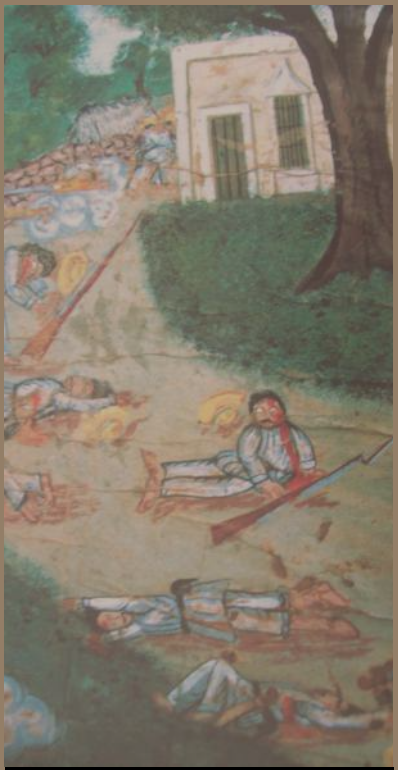
The Guatemalan Civil War led to massacres that annihilated villages in the Maya highlands

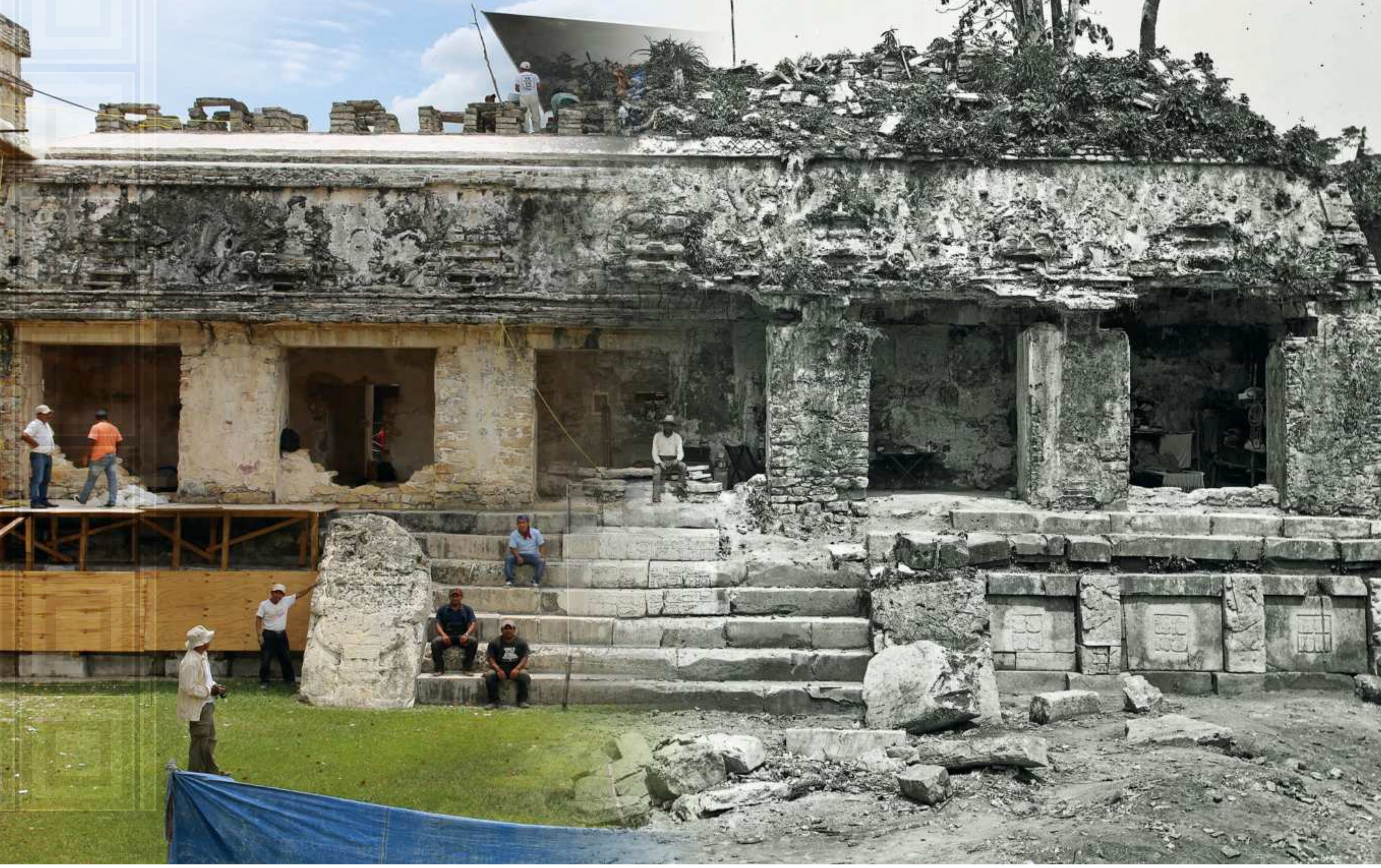
THE CASTE WAR

THE LITTLE-KNOWN REINCARNATION OF A MAYA STATE

For half a century, the Maya Empire rose from the ashes as a self-declared autonomous state that fought for independence. In the Campeche-Mérida region of Yucatán, indigenous Maya outnumbered the European-descended Yucatecos by five to one. Rebellion broke out in 1847 when the Yucatán authorities learned of a revolutionary plot and executed Manuel Antonio Ay, a Maya leader, and killed other insurgents. However, the pre-emptive strike backfired. The Maya were sparked into revolt and pushed government forces almost completely out of Yucatán, only for the Yucatecos to recover as the Maya army disintegrated, melting away to return home to plant new crops.

Stalemate ensued for the next 50 years as raids took place over the borders of Maya-controlled territory, the largest of which was named Chan Santa Cruz after its capital city. When the British Government switched sides and backed the Mexicans, they closed off trade between British Honduras (modern Belize) and Chan Santa Cruz, depriving the Maya of crucial military supplies. The Mexican Army's next campaign drove right into Maya territory and captured the city of Chan Santa Cruz. Not for the first time, a Maya capital city had fallen to the superior firepower of Hispanic forces. The brief resurrection of a Maya state was over.


The Caste War lasted 54 years as Mexicans and Maya struggled for control of Yucatán

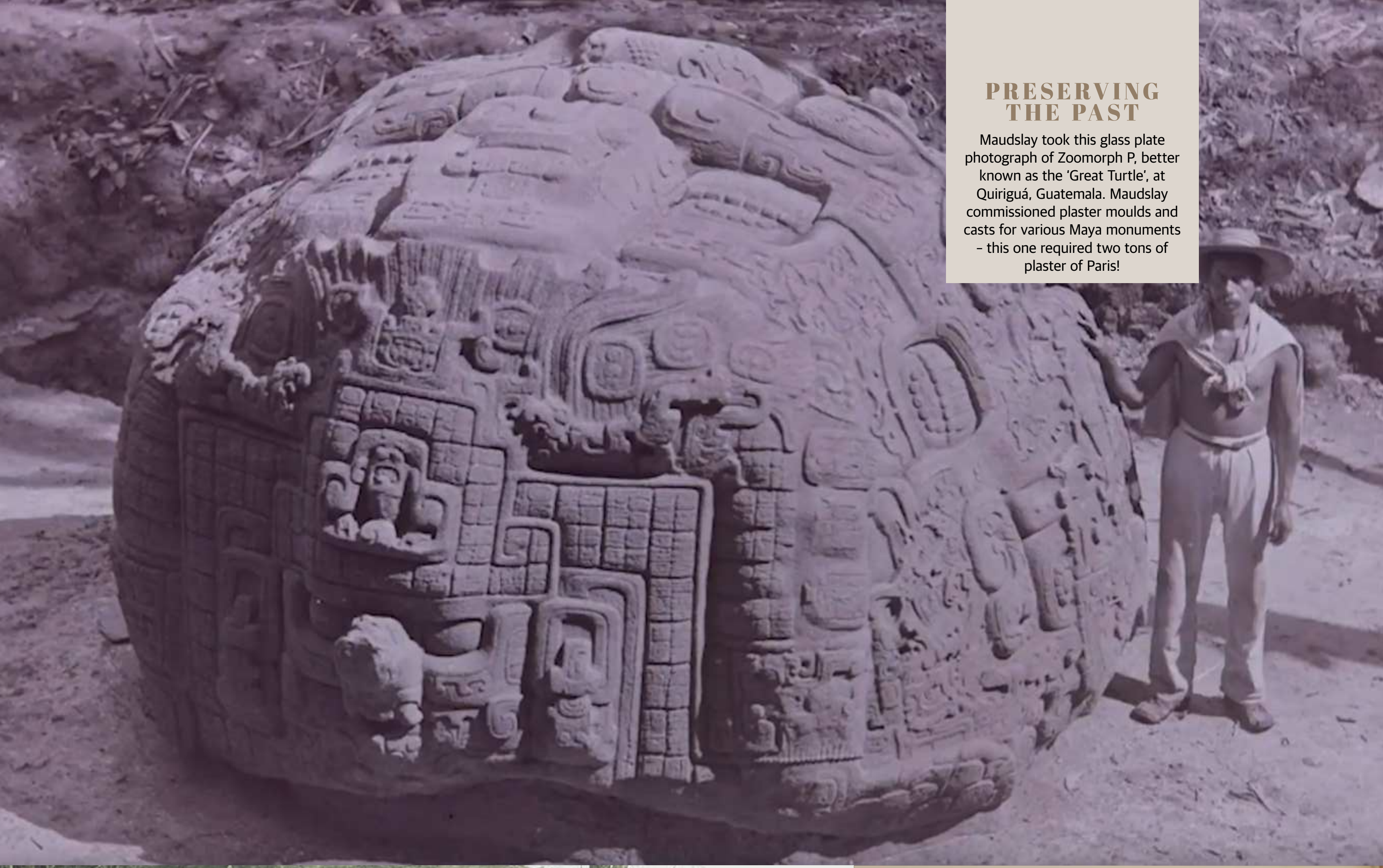


EXPLORING THE MAYA WORLD

Journey into the past with this unique online exhibit, which is preserving Maya cultural heritage for generations to come

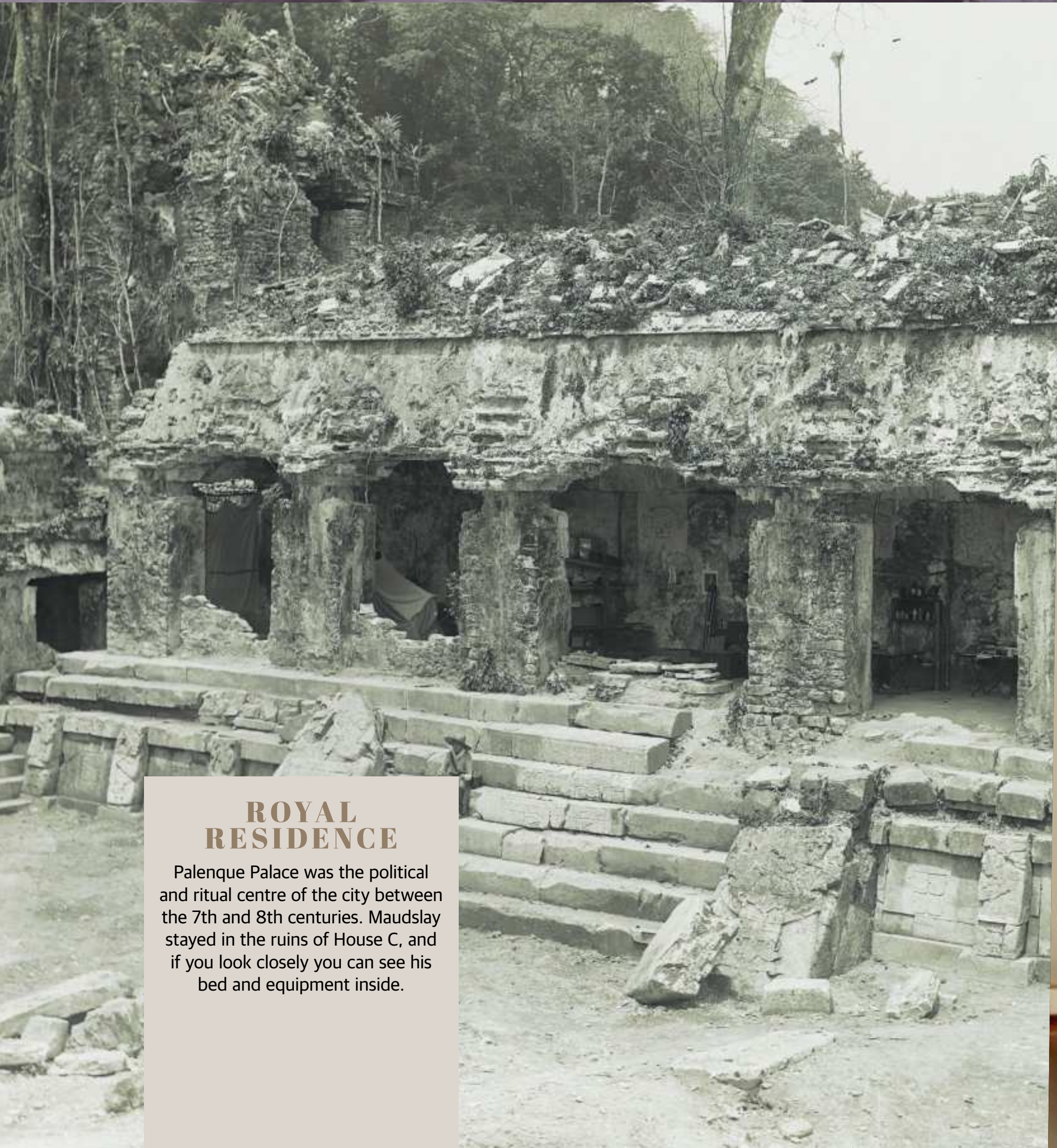
Between the 1880s and 1890s, British explorer Alfred Maudslay travelled across Mexico and Central America studying and documenting ancient Maya heritage. Developing the first glass plate photographs of famous sites such as Chichén Itzá and creating over 400 plaster casts of Maya art, inscriptions and monuments, Maudslay left behind a legacy that has proved vital to Mesoamerican research and scholars.

Over 100 years later, the British Museum and Google Arts & Culture have partnered up to launch a new online exhibition, Exploring The Maya World, to bring Maudslay's indispensable work to the world. The British Museum's rarely seen collection has been digitised and made accessible for the first time, bringing the fascinating untold stories of the Maya civilisation to life. Among the many features of Exploring The Maya World are nine new curated online exhibitions, over 650 assets including photographs, journals, artefacts and drawings, and a documentary that offers a behind-the-scenes look at the exhibition. Thanks to modern technology, you can explore 200 3D models that have been digitally reassembled from Maudslay's plaster casts, as well as take a 360-degree tour of the ancient Maya city of Palenque – all within the comfort of your own home.



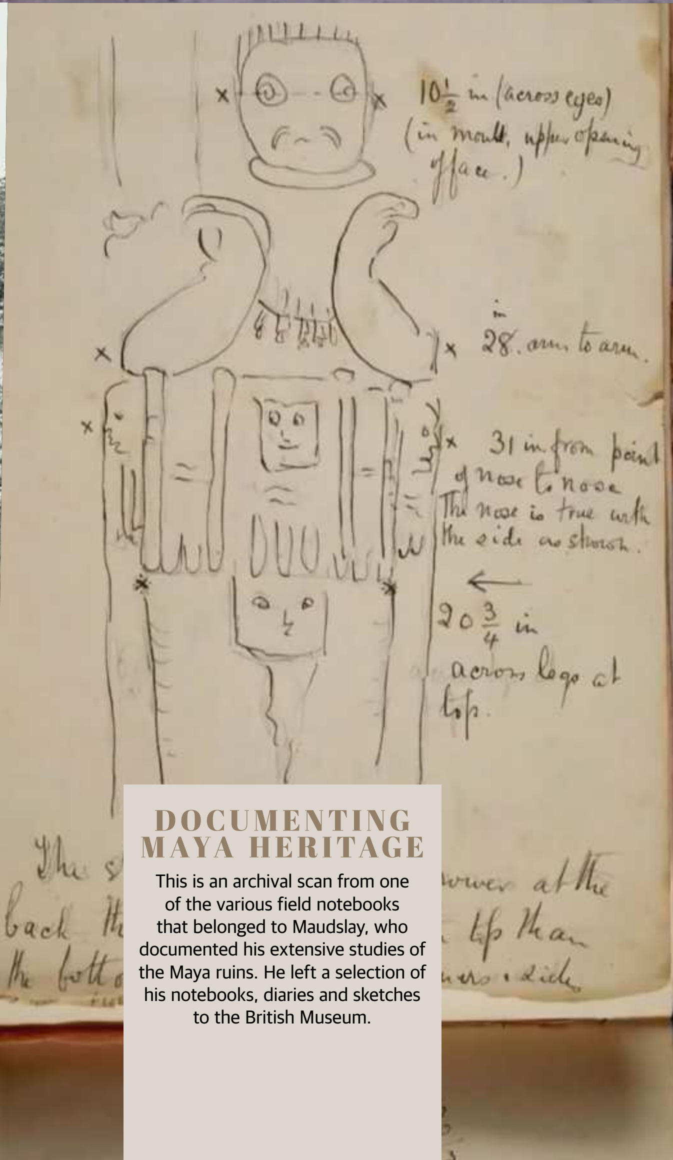
PRESERVING THE PAST

Maudslay took this glass plate photograph of Zoomorph P, better known as the 'Great Turtle', at Quiriguá, Guatemala. Maudslay commissioned plaster moulds and casts for various Maya monuments – this one required two tons of plaster of Paris!



ROYAL RESIDENCE

Palenque Palace was the political and ritual centre of the city between the 7th and 8th centuries. Maudslay stayed in the ruins of House C, and if you look closely you can see his bed and equipment inside.



10½ in (across eyes)
(in mould, upper opening of face.)

in
28. arm to arm.

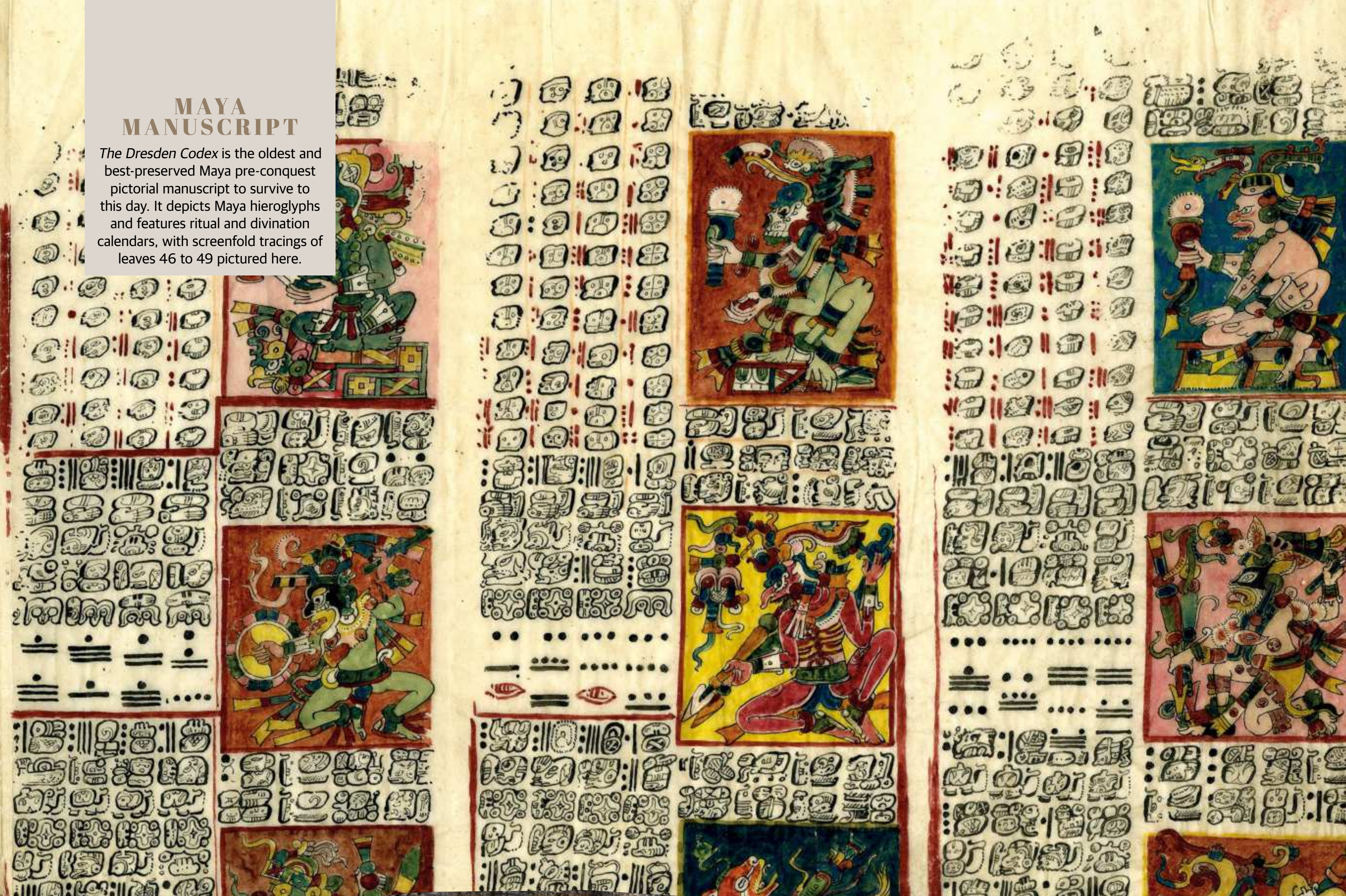
31 in from point of nose to nose
The nose is true with the side as shown.

20¾ in
across legs at top.

The s … ower at the
back th … tip than
the botto … … side

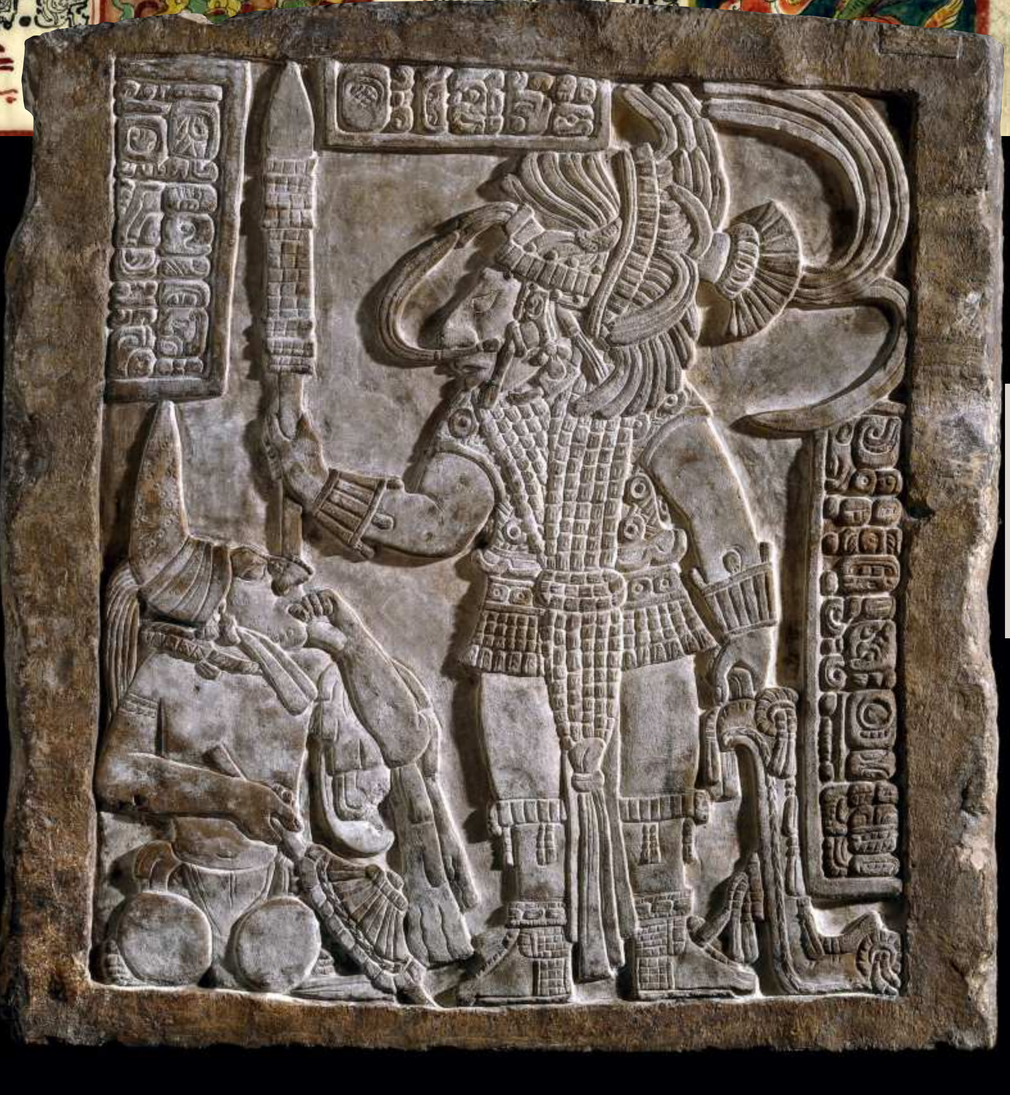
DOCUMENTING MAYA HERITAGE

This is an archival scan from one of the various field notebooks that belonged to Maudslay, who documented his extensive studies of the Maya ruins. He left a selection of his notebooks, diaries and sketches to the British Museum.



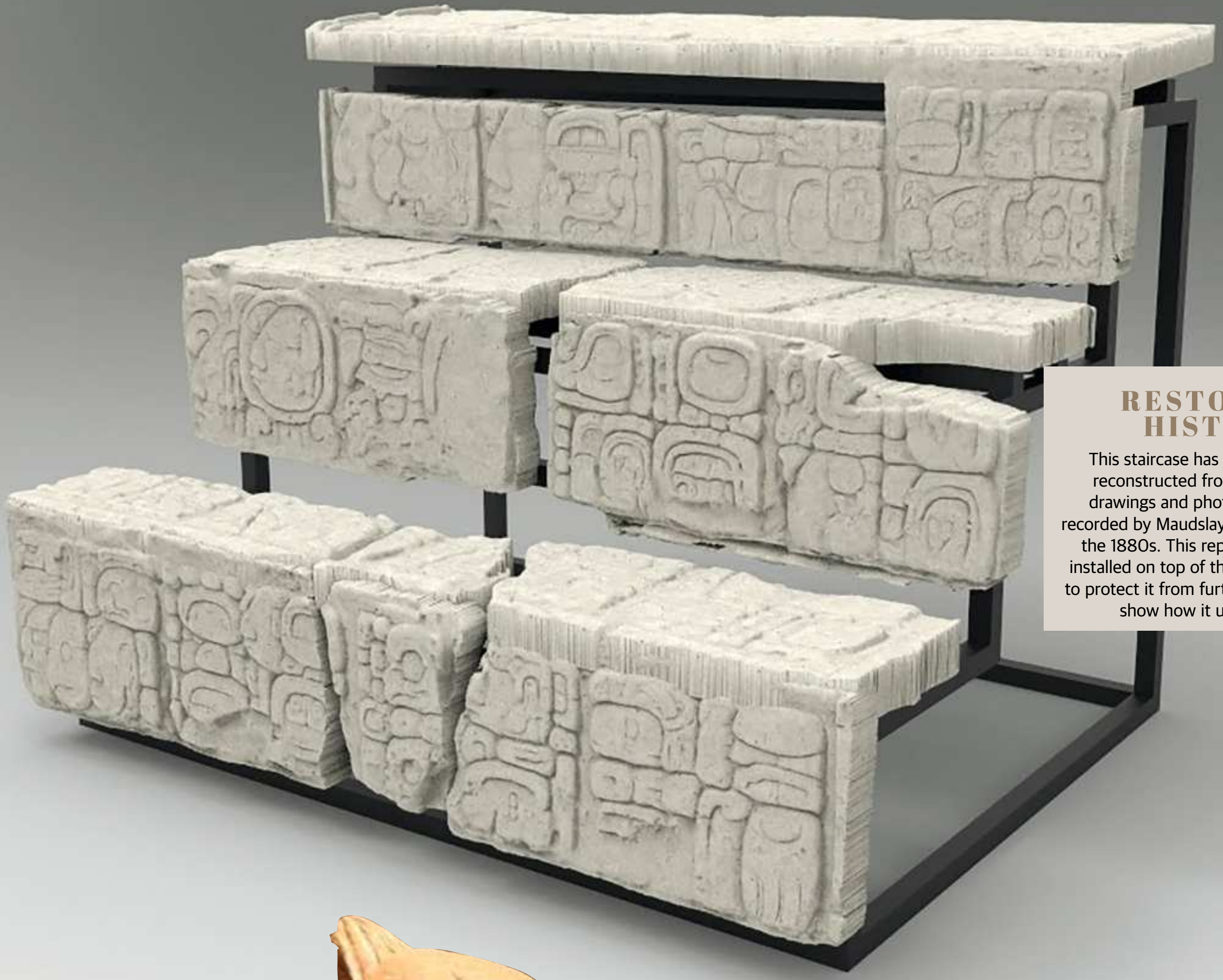
MAYA MANUSCRIPT

The Dresden Codex is the oldest and best-preserved Maya pre-conquest pictorial manuscript to survive to this day. It depicts Maya hieroglyphs and features ritual and divination calendars, with screenfold tracings of leaves 46 to 49 pictured here.



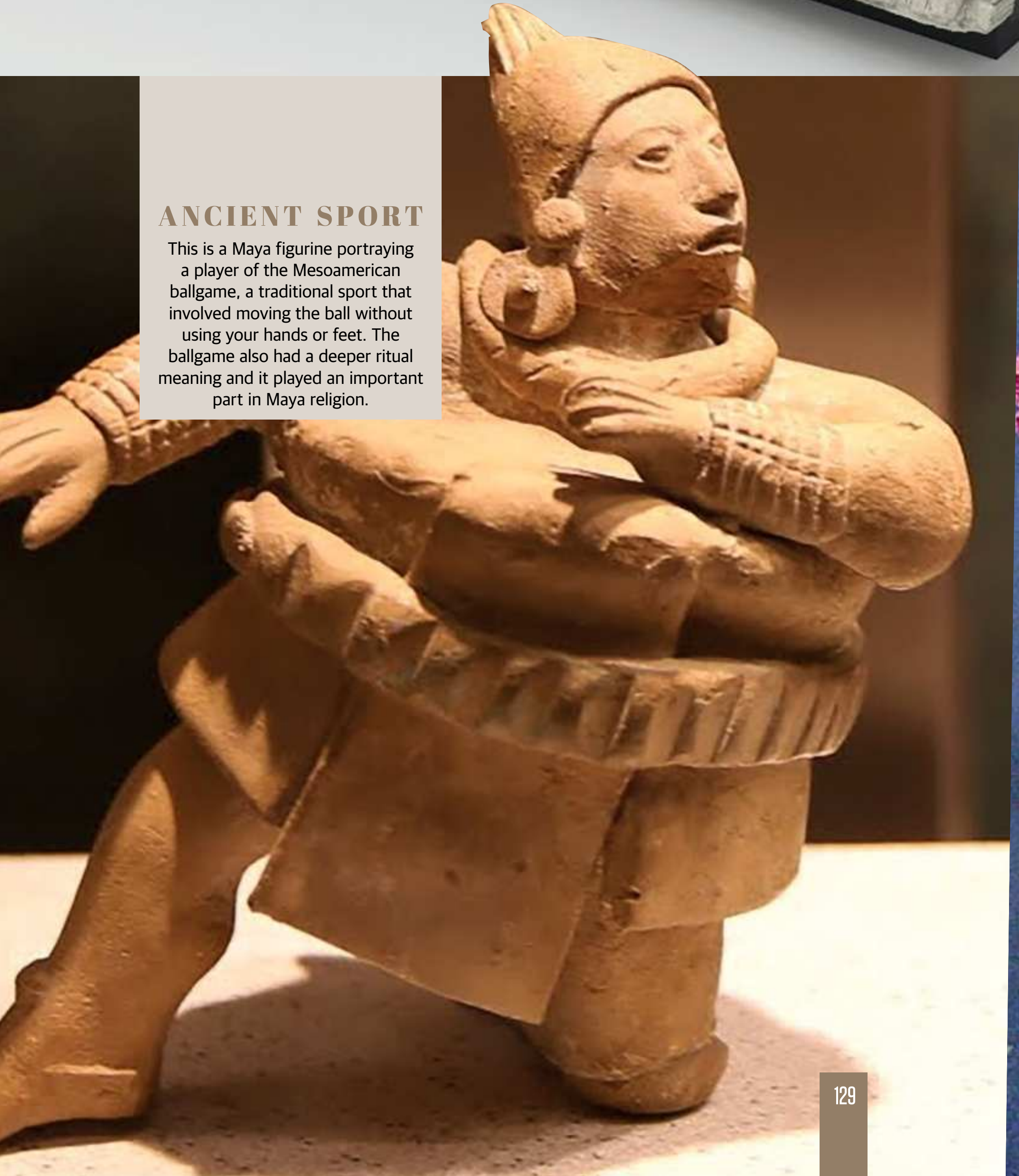
MIGHTY WARRIOR

This is a limestone lintel from Structure 21 in the ancient city of Yaxchilán, Mexico, depicting the Maya king Bird Jaguar IV with a captive sat at his feet. The king is wearing a warrior costume and holding a spear in his right hand.



RESTORING HISTORY

This staircase has been robotically reconstructed from plaster casts, drawings and photos meticulously recorded by Maudslay at Palenque during the 1880s. This reproduction will be installed on top of the original staircase to protect it from further damage and to show how it used to look.



ANCIENT SPORT

This is a Maya figurine portraying a player of the Mesoamerican ballgame, a traditional sport that involved moving the ball without using your hands or feet. The ballgame also had a deeper ritual meaning and it played an important part in Maya religion.

TRADITIONAL ATTIRE

Maya women used backstrap looms, which wrapped around their waists, to make textiles from cotton, although they could also be made from barkcloth or animal skin. In fact, textiles were so important to the Maya that sometimes tribute was paid with blankets.

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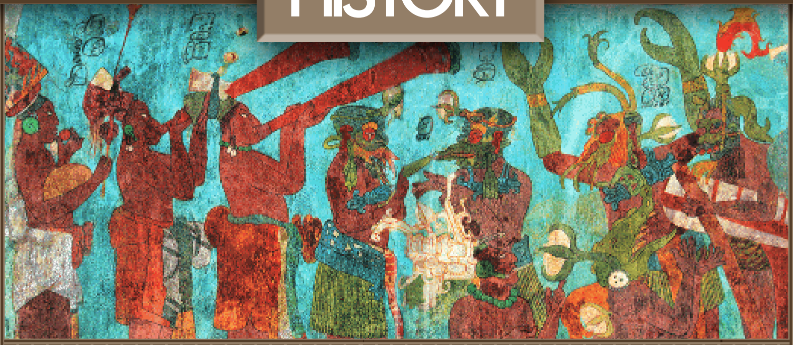

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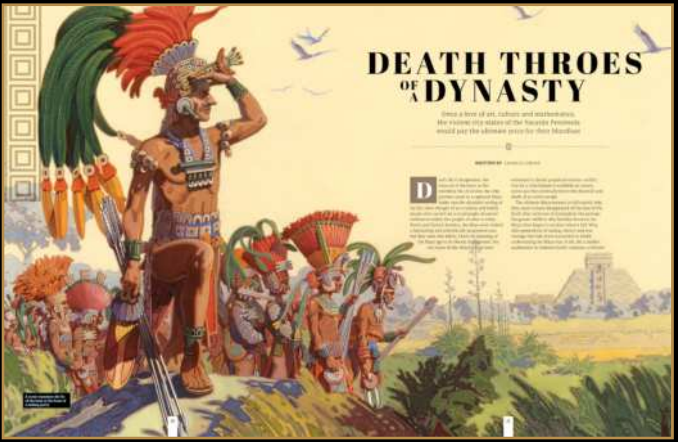

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